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FARMWORKERS IN RURAL AMERICA, 1971–1972

HEARINGS

BEFORE THE

SUBCOMMITTEE ON MIGRATORY LABOR

OF THE

COMMITTEE ON
LABOR AND PUBLIC WELFARE
UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST AND SECOND SESSIONS

APPENDIX

PART 5A

Printed for the use of the
Committee on Labor and Public Welfare

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U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1972

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Format of Hearings on Farmworkers in Rural America

The Subcommittee on Migratory Labor conducted public hearings in Washington, D.C., and in San Francisco and Fresno, Calif., during the 92d Congress on "Farmworkers in Rural America." These hearings are contained in the following parts:

Subject matter	*Hearings dates*
Part 1: Farmworkers in Rural Poverty	July 22, September 21 and 22, 1971.
Part 2: Who Owns the Land?	November 5, 1971.
Part 3: Land Ownership, Use and Distribution:	
A. San Francisco	January 11, 1972.
B. Fresno	January 12, 1972.
C. San Francisco	January 13, 1972.
Part 4: Role of Land-Grant Colleges:	
A	June 19, 1972.
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Part 5: Appendix: A and B.	

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Articles, publications, etc.:

"A Profile of California Agribusiness," Agribusiness Accountability Project, Washington, D.C., January 1972 ---------- 3055

"Arvin and Dinuba Revisited: A New Look at Community Structure and the Effects of Scale of Farm Operations," by Bruce L. LaRose, graduate student, Department of Geography, University of Minnesota ---------- 3355

"Corporations Having Agricultural Operations," Agricultural Economic Report No. 156, April 1969, Economic Research Service, USDA ---------- 3137

"Economies of Size in Farming," Agricultural Economic Report No. 107, February 1967, Economic Research Service, USDA ---------- 3467

"Our 31,000 Largest Farms," Agricultural Economic Report No. 175, March 1970, Economic Research Service, USDA ---------- 3170

"Who Will Control U.S. Agriculture?", policies affecting the organizational structure of U.S. agriculture, University of Illinois special publication No. 27, August 1972 ---------- 3409

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AGRIBUSINESS ACCOUNTABILITY PROJECT
1000 Wisconsin Avenue, N.W.
Washington, D.C. 20007

A Profile of California Agribusiness

January 11, 1972

(3055)

Preface

This "Profile of California Agribusiness" published by the Agribusiness Accountability Project seeks to simply show the general wide spread involvement by all segments of American big business in agriculture.

No effort has been made here to list all of the large corporations who are involved in agribusiness. We desire merely to show that the once clear line between the rural farmer and the urban big businessman has now become almost indistinguishable.

All financial figures used are for 1970 (unless otherwise specifically noted). The numbers which appear in parenthesis opposite Market Value, Revenues, Assets and Profit signify that corporations respective place in the national rankings according to Forbes Dimensions of American Business Annual Directory (May 15, 1971).

A generous portion of the information used in preparing this profile was drawn from the public files of various government regulatory agencies, such as the Securities and Exchange Commission, the Federal Trade Commission and the Interstate Commerce Commission,

Annual company stockholder reports and proxy statements were examined closely and various trade publications and major newspapers and magazines like the Wall Street Journal and the Los Angeles Times were read closely each day.

This profile is part of the continuing effort by the Agribusiness Accountability Project to not only document the nature and extent of the role in big business in rural America but make these corporations more accountable to the public they should serve.

- A.V. Krebs
Staff Researcher
January 7, 1972

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ANDERSON, CLAYTON & COMPANY

P.O. Box 2538, Houston, Texas 77001

Financial Profile

Market Value:		$117,629,000
Revenues:	(272)	$639,077,000
Assets:		$345,956,000
Net Profit:		$ 12,373,000

Chief Executive: T.J. Barlow
Total Remuneration: $143,000
Value of Shares Owned/Controlled By: $302,000

Physical Profile

No. of Employees: 18,000
Owns 52,000 acres in the San Joaquin Valley (30,738 acres located in the Westlands Water District
Divisions and subsidiaries - see following page

Operation Notes

Agribusiness Income - 68% of total
In 1969 Vista del Llano Farms leased 7,180.51 acres in Fresno County from the Southern Pacific Company.
In 1970 Vista del Llano Farms leased 7,180.19 acres in Fresno County from the Southern Pacific Company.

ASCS Subsidy Payments:

1970	$1,105,762
1969	$ 778,624
1968	$ 745,647
1967	$ .....
1966	$ 622,840
	$3,252,873

FARMING

Unfavorable weather conditions adversely affecting cotton, safflower and alfalfa yields prevented the Vista del Llano Farm operation in the San Joaquin Valley of California from achieving anticipated results for the year. However, returns proved substantially better than in recent years, with further improvements expected in 1972.

As with most commercial farming operations in California, and many elsewhere, it has become extremely difficult to operate this farm profitably because the large and frequent increases in labor, water, tax, and other costs cannot be fully offset by increases in prices of farm products, most of which are frequently in surplus supply. These conditions have in turn depressed sales values for the land, which is currently well suited only to farming operations. Nevertheless, considerable progress is being made in continuing efforts to convert various segments of this large and scattered farming activity to an adequately profitable basis.

- 1970 Annual Repor

Interconnecting Directorates

Johns Hopkins Hospital; Austin, Dabney, Northrop & Garwood (law); Fulbright, Crooker & Jaworski (law); Morgan Stanley & Co.; Rotan, Mosle-Dallas Union Inc.; Riviana Foods Inc., among others.

Anderson Clayton Foods

One Main Place, Dallas, Texas 75250

Grocery Products:

Margarines, salad dressings, shortenings, salad oils, cheeses and meats

Food Service Products:

Margarines, salad dressings, shortenings, and edible oils

Specialty Formulated Products for Food Processing

Coating fats, flavored fats, beverage fats, stabilizers and emulsifiers

Margarines: Chiffon, Flair, Glen Eden, Golden Mist, Grayson, Hollandale, Log Cabin, Meadolake, Velvet, Accolade, Restaurant Pak

Salad Dressings: Seven Seas

Salad Oils: Mrs. Tucker's, Jaxmor, Unique

Shortenings: Gleam, Mrs. Tucker's, Velvet, Golden Flair, Liqui-Fry, Kerba, Mava, EZ Flo, Lik-wid, Southern Queen, Mix-Ezy, Nylene, Fryo

Cheeses & Meats: J. S. Hoffman products

Anderson Clayton

Industrial Division

100 W. Clarendon Ave.,
Phoenix, Arizona 85013

Vegetable Oilseed Crushing
Vegetable Oil Refining
Cotton Ginning
Cotton Compressing
Crop Financing

Paymaster Oil Mill Co.
San Joaquin Cotton Oil Co.
Western Compress Company
Western Cotton Products Co.

Farming
Vista del Llano Farms

RANGER/PAN AMERICAN INSURANCE COMPANIES

P. O. Box 2807, Houston, Texas 77001

Property-Casualty:
Special commercial and industrial risks, automobile special risk, institutional properties, liquid butane/propane gas dealers, gasoline and oil marketers, anhydrous ammonia dealers, gas utility risks, aviation insurance and workman's compensation

Life, Accident and Health:
Whole life and term, group, variable annuities, pension plans and self-employed retirement income plans

Ranger Insurance Company
Ranger Lloyds
Ranger County Mutual Insurance Co.
Ranger Insurance Exchange

Pan American Insurance Company
Pan American Fire & Casualty Co.
Pan American Thrift Insurance Co.

Ranger Insurance Managers, Inc.
Ranger General Agency
Ranger-Allied Underwriters
Premium Budget Agency

Ranger National Life Insurance Company

Long Reach MANUFACTURING

12300 Amelia Drive, Houston, Texas 77045

Hydraulically-Operated Lift Truck Clamps and Attachments

Carton clamps, rotating clamps, forging clamps, cotton bale clamps, drum dumper clamps, concrete pipe clamps, paper roll clamps, load inverters, load stabilizers, narrow aisle attachments, tire handling attachments, push/pull load attachments.

Special Materials-Handling Products

Load transfer and pallet stacker
Bag transfer and pallet stacker

Custom Engineered Products

Anderson Clayton

Agricultural Products Division

774 China Street, Abilene, Texas 79602

Corn, cotton, sorghum and alfalfa planting seed

Tomco
Paymaster

Cattle, poultry, sheep, swine and horse feeds

Paymaster
Superior
Hy-Lay

GULF ATLANTIC DISTRIBUTION SERVICES

P.O. Box 2588 Houston, Texas 77001

General Merchandise Warehousing
Cotton Compressing and Warehousing
Dry Bulk Handling
Household Goods Moving and Storage
Trucking

Gulf Atlantic Warehouse Co.
Great Southwest Warehouses, Inc.
Seattle Transfer & Storage Company

Allied Van Lines Agent

Anderson Clayton

Coffee Division

120 Wall Street,
New York, New York 10005

Coffee agents in consuming and producing markets throughout the world

Purchase and sale of green coffee for U. S. market—South American, Central American and African Growths

Anderson Clayton Cotton

2 South Front Street,
Memphis, Tennessee 38103

Purchase of Raw Cotton—U. S. Growths

Sale of Raw Cotton—U. S. Growths

Buying offices in Arizona, California, Missouri, Tennessee and Texas

Domestic sales offices in Arizona, California, Georgia, South Carolina, Tennessee and agents in free countries of Europe and Asia

Anderson Clayton BRAZIL

Industria e Comercio

Rua Formosa 367, Sao Paulo, Brazil

Consumer and Institutional Foods
Margarines, edible oils, shortenings, peanut butter and speciality products
Vegetable Oilseed Processing
Seed crushing and oil refining
Cotton Ginning and Compressing
Warehousing and Distribution
Cotton, coffee and general merchandise
Formula Feeds
Animal and poultry
Commodity Merchandising
Cotton, coffee and vegetable oilseed products

ACCOSA MEXICO

Paseo de la Reforma #51
Mexico 1, D.F., Mexico

Consumer and Institutional Foods
Margarines, edible oils, shortenings, peanut butter, prepared mixes, gelatins, candies and specialty products
Vegetable Oilseed Processing
Seed crushing and oil refining
Cotton Ginning and Crop Financing
Formula Feeds
Animal and poultry
Planting Seeds
Corn, cotton and peanut seeds
Commodity Merchandising
Cotton, peanuts and vegetable oilseed products
Insecticides

ACCOSA PERU

Lampa 946, Lima, Peru

Consumer Foods
Edible oils, shortenings and roasted coffee

Warehousing and Distribution
General merchandise, coffee and cotton warehousing

Commodity Merchandising
Coffee and vegetable oilseed products

A. Aristizabal & Cia. S.A. COLOMBIA

Cra. 10/14-33 Oficina 711,
Bogota, Colombia

Vehicle and Spare Parts Distribution

Automobile and truck agencies

Coffee Processing and Exporting

ACCOSA SWITZERLAND

10 Place de la Gare, Lausanne, Switzerland

European Financial Activities

Commodity Merchandising
Cotton, coffee and vegetable oilseed products

ARDEN-MAYFAIR, INC.

2500 South Garfield Avenue, Los Angeles, California 90054

Financial Profile

Market Value:		$ 20,184,000
Revenues:	(276)	$630,000,000
Assets:		$135,000,000
Net Profit:		$ 2,823,000

Chief Executive: A.J. Crosson
Total Remuneration: $75,000
Value of Shares Owned/Controlled By: Not Available

12,317 stockholders and 2,784,606 common shares of stock outstanding

Physical Profile

No. of Employees: 10,400
222 retail grocery stores and 41 plants and warehouses

Divisions and subsidiaries: Gelsen's Market Division, Richards Market, Market Confections Inc., S & A Discount Foods, Mayfair Markets, A & M Food Services, Farrel's Ice Cream Parlour, GPS (manufacturers and sells water treatment equipment and pool chemicals), Arden Dairy Division, Ardco Inc., Camellia Diced Cream Co., Enterprise Equipment Inc., Artco Printers and Litho, A & M Notes Inc., Richards Lido, Inc. and A-M Properties.

Recently acquired Telautograph Corp. (message and transmission equipment) which at the time owned 300,900 shares of Arden-Mayfair

Operation Notes

Groceries are purchased and delivered from "independent wholesalers.

On April 28, 1970 the Federal Trade Commission tentatively accepted a consent order that prohibits Arden-Mayfair, Inc. from accepting allegedly illegal brokerage services on purchases of grocery products. Besides A-M the order named Chambosse Co. (Los Alamitos, Calif.) and Halsey K. Chambosse, an official of the brokerage co. The FTC claimed A-M was using Chambosse as an agent in purchasing of private label grocery products from various sellers. A-M receives valuable brokerage services from Chambosse without paying any brokerage. (Details Wall Street Journal, April 28, 1970.

Interconnecting Directorates

Mitchell, Silberberg & Knupp (law); Valley National Bank (Phoenix, Arizona); Rhoten, Rhoten & Speerstra (law); Northrop Corp., among others.

BANGOR PUNTA CORPORATION

One Greenwich Plaza, Greenwich, Connecticut 06830

Financial Profile

Market Value:		$ 32,240,000
Revenues:	(468)	$342,186,000
Assets:		$347,527,000
Net Profits:		$ -470,000

Chief Executive: D.W. Wallace
Total Remuneration: $100,000
Value of Shares Owned/Controlled By: $274,000 (common stock)

Physical Profile

No. of Employees: 9,000

Subsidiaries: Piper Aircraft Corp., Piper Aircraft International, Balboa Motor Homes, Duo, Featherweight Corp., Jensen Marine, The Kinney Co., The Luhrs Co., O'Day, Ranger Yachts, Rent-A-Cruise of America, Seagoing Boats, Starcraft Co., Yankee Motor Co., O & M Manufacturing Co., Waukesha Motor Co., Waukesha Motor Western, Ltd., Producers Cotton Oil Co. (see below), General Ordinance Equipment Corp., The Identi-Kit Co., The Lake Erie Chemical Co., Pacific Technica, Smith & Wesson, Smith & Wesson-Fiocchi, Smith & Wesson Leather Co., Smith & Wesson Pyrotechnics, Inc., Smith & Wesson Security Services, Stephenson Co., Barker Manufacturing Co., Bartlett-Snow, FECO, Jetstream Systems Co., Pameco-Aire, and five international companies.

Operation Notes

Agricultural Sales
Contribution $40.7 million of the total $293.6 million
Agricultural Profit
Contribution $ 1.3 million of the total $14.8 million

Producers Cotton Oil Company (South Lake Farms)
-owns 60,000 acres and leases another 40,000 acres in the San Joaquin Valley and Arizona.
-integrated growing, processing, warehousing and merchandising of cotton and agricultural produce; vegetable oil and animal feed processing and manufacturing.
-properties and depreciation and subsidiary - see following page

Interconnecting Directorates

Bank of America N.T. & S.A.; Lone Star Industries; United Brands, among others.

(3) Properties and Depreciation:

Properties and related accumulated depreciation at September 30, 1970 consist of:

	Properties, at Cost	Annual Rates of Depreciation	Accumulated Depreciation
Land	$ 3,487,943	—	—
Farm Lands	11,755,717	—	—
Building and site improvements	30,699,136	2.5 to 10%	9,759,763
Machinery and Equipment	74,561,422	5½ to 33⅓%	46,109,826
Leaseholds	2,823,895	Term of Lease	995,081
	$123,328,113		$56,864,670

Farm lands and other properties of Producers Cotton Oil Company, a consolidated subsidiary, are substantially pledged under deeds of trust and mortgages to secure certain insurance company loans and bank loans.

The aggregate amount of depreciation charged for the years ended September 30, 1970 and 1969 was $6,636,753 and $6,305,120, respectively.

The "excess cost over net assets of companies acquired" is considered to have a continuing value over an indefinite period and therefore is not being amortized.

Producers properties are an asset believed to have a market value now—and more so in the future—substantially in excess of our $12 million carrying cost. Proposals are being readied ways to improve returns from this land. The University of lifornia has completed the first phase of a preliminary study of the San Joaquin Valley's west side, indicating a long-range potential for urbanizat n and industrial development in the agricultural region. A good share of Producers' land is located in this area, which is bisected by the mammoth San Luis Canal and a new freeway connecting San Francisco and Los Angeles. Additional studies are aimed at developing still other land as small "Rancheros", subdivisions, and real estate investment programs.

- 1970 Annual Report

Producers Cotton Oil Co.
in 1969 leased 4,448.85 acres
in Kern County from the
Southern Pacific Co.

South Lake Farms ASCS Subsidies	
1970	$1,875,454
1969	$1,788,052
1968	$1,177,320
1967	$1,304,093
1966	$1,468,696
	$7,613,615

Condensed balance sheets of Prodco Finance Co., wholly owned by Producers Cotton Oil Company (a subsidiary of Bangor Punta) are as follows

Prodco Finance Co.—Condensed Balance Sheets

Assets	*September 30* 1970	1969
Cash	$ 25,000	$ 25,000
Notes and accounts receivable	7,363,318	8,058,505
Loans and advances to growers	15,615,987	27,507,041
Crop loans to parent company owned ranches	2,481,890	5,528,352
Deferred charges	1,224	1,768
	$25,487,419	$41,120,666
Liabilities and Capital		
Loans payable to banks	$10,450,879	$25,065,844
Accounts payable and accrued expenses	957,741	530,404
Short-term advances from parent company	6,283,702	7,684,503
	$17,692,322	$33,280,751
Parent company investment:		
Subordinated loans	4,000,000	4,000,000
Advances	3,723,523	3,787,768
Capital stock, 25,000 shares—$1 par value	25,000	25,000
Retained earnings—beginning of year	27,147	15,959
Add net income (revenues $2,515,534 less expenses of $2,496,107 in 1970)	19,427	11,188
Retained earnings—end of year	46,574	27,147
	7,795,097	7,839,915
	$25,487,419	$41,120,666

Producers Cotton Oil Company is obligated to loan Prodco Finance Company up to $4,000,000 subordinated to the bank loans, and has also guaranteed 20% of the maximum amount advanced by certain banks to Prodco during the year, and with respect to the principal bank has guaranteed the 20% or $4,000,000 whichever is greater.

Certain operating units and the investment in $1,500,000 principal amount A. M. Castle & Co. 6% convertible debentures are planned to be sold or liquidated. For the balance sheet, the aggregate net assets of these units and the debentures at September 30, 1970 have been shown as "Net Assets of Operations Being Discontinued" and the statement of consolidated income includes the result of operations of these units as "Income (Loss) of Operations Being Discontinued." Subsequent to September 30, 1970, three of such operating units (Bale Pin Company, Metcalf & Eddy, Inc. and Connell Associates, Inc.), whose net assets comprised approximately one-half of the carrying amount on the balance sheet, were sold for an aggregate consideration of approximately $17,000,000. Of the proceeds, $10,000,000 will be paid in permanent reduction of the long-term debt. The profit realized will be deferred pending determination of the results of sale or liquidation of the remaining units and the tax effects thereon.

- 1970 Annual Report

BANKAMERICA CORP. (Bank of America N.T. & S.A.)

P.O. Box 3415, Rincon Annex, San Francisco, California 94120

Financial Profile

Market Value:	(39)	$2,201,920,000
Revenues:	(94)	$1,489,255,000
Assets:	(2)	$29,739,902,000
Net Profits:	(25)	$163,878,000

Chief Executive: A.W. Clausen
Total Remuneration: $168,000
Value of Shares Owned/Controlled By: $339,000

Physical Profile

No. of Employees: 36,000 977 branches in California

Own a 5% investment in Envirotech Corp.
Wholly-owned subsidiary - Western American Financial Inc. (purchases paper of real estate developers)
Claims a $125 million real estate trust

Operation Notes

Made over 100,000 agricultural loans in the years 1960-1970 totaling over $10.5 billion
1970 - made 8600 loans to agriculture totaling $1.5 billion
Claims the number of agricultural loans is decreasing but the size or amount of loans are increasing

In 1966 helped finance a $70 million fertilizer plant in India to be owned jointly by the bank, Armour & Co., U.S. Steel and India's privately-owned Birla Industries.
In 1968 the bank helped establish the Agribusiness Investment Corporation although bank officials denied any "official" connection with the Corporation. In 1968 the Agribusiness Investment Corp. received a $9,001 ASCS subsidy.

Interconnecting Directorates

Litton Industries; Pacific Mutual Life Insurance Co.; Producers Cotton Oil Co.; Bekins Co.; Di Giorgio Corp. (3); Broadway-Hale Stores Inc. (4); Pacific Telephone and Telegraph (2); Sears Roebuck & Co.; Dillingham Corp.; Times-Mirror Corp. (2); Getty Oil Co. (2); Levi Strauss & Co.; Pan American World Airways; Santa Fe Industries; Kaiser Industries (2); Southern California Edison Co.; McEnerney & Jacobs (law); Norton Simon Inc.; Time, Inc.; Consolidated Foods Corp.; Von's Grocery Co.; Stanford Research Institute, American Potato Co.; Prudential Insurance Co.; Standard Oil of California (2); Lucky Stores Inc.; Pacific Lighting Corp.(2); Hallmark Cards Inc.; Ford Motor Co.; Samuel H. Kress Foundation; Foremost McKesson Inc.; Newhall Land and Farming Co., among others.

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THE BANK OF CALIFORNIA, N.A.

P.O. Box 3511, Rincon Annex, San Francisco, California 94120

Financial Profile

Market Value:		$75,061,000
Revenues:		$128,120,000
Assets:	(126)	$1,916,144,000
Net Profit:		$6,922,000

Chief Executive: Charles de Bretteville
Total Remuneration: Not Available
Value of Shares Owned/Controlled By: Not Available

No. of Stockholders: 7,069

Physical Profile

No. of Employees: 3,856 70 offices in California

Subsidiary: San Francisco and Fresno Land Co.
In 1970 contributed $ .05 per share to consolidated net income
In 1969 contributed $ .045 per share to consolidated net income
Farmed 7500 acres in 1970 as opposed to 5000 acres in 1969 - "a further increase is expected in 1971"
A "Fresno Land Co." received a $16,111 ASCS subsidy in 1969.

Operation Notes

Manages Safeway Stores Inc. U.S. Employee Retirement Plan

Interconnecting Directorates

Caterpillar Tractor Co.; J.G. Boswell Co.; Safeway Stores Inc. (2); Fibreboard Corp.; Southern Pacific Co.; Merrill Lynch, Pierce, Fenner & Smith; Boeing Co.; Broadway-Hale Stores Inc.; Cahill Investment Co.; Di Giorgio Corp.; Potlatch Forests Inc.; FMC Corp. Western Pacific Railroad Co. (4); Times Mirror Co.; Pacific Gas & Electric Co. (2); Shell Oil Co.; Ridder Publications; Stauffer Chemical Co.; Pacific Telephone & Telegraph Co.; Del Monte Corp. (John Geer Chevrolet Co.; Hyster Co.; Natomas Co.; American Preside Lines, Ltd.; Bogle, Gates, Dobrin, Wakefield & Long (law); Pacific Lumber Co.; Pillsbury, Madison & Sutro (law) (2); M & T Inc.; U.S. Leasing International Inc.; Amfac Inc. (2); Signal Insurance Co.; Ideal Basic Industries; Ketchikan Pulp Co.; California Liquid Gas Corp., among others.

CAMPBELL SOUP COMPANY

Camden, New Jersey 08101

Financial Profile

Market Value:	(92)	$1,083,494,000
Revenues:	(179)	$ 964,754,000
Assets:	(440)	$ 605,498,000
Net Profits:	(120)	$ 62,720,000

Chief Executive: W.B. Murphy
Total Remuneration: $242,000
Value of Shares Owned/Controlled By: $2,210,000

No. of Stockholders: 30,000 33,477,294 average shares outstanding

Physical Profile

Brands, Principal plants, and Subsidiaries - see following page

No. of Employees: 30,000
Company claims 25% minority employment

Operations Notes

Large part of its produce buying is through farm contracts

Interconnecting Directorates

J.P. Morgan & Co., Inc.(2); Penn Mutual Life Insurance; Armstrong Cork Co.; White & Case (law); Sullivan & Cromwell (law) (2); Bank of New York; Merck & Co. Inc. (3); Bethelhem Steel Co.; International Paper Co. (2); Bankers Trust New York Corp.; Prudential Life Insurance Co.; Rockefeller Foundation; B.F. Goodrich Co.; Canadian Imperial Bank of Commerce; Honeywell (2); American Telephone & Telegraph Co.; Drinker, Biddle & Reath (law); Ford Motor Co.; New Jersey Bell Telephone Co.; Pharmaceutical Manufacturers Association; U.S. Steel Corp.; Equitable Life Assurance Society of the U.S.; Interpace Corp.; Morgan Guaranty Trust Co. of New York (2); John Wanamaker; Cities Service Co.; General Electric Co.; INA Corp.; Scott Paper Co.; Smith Kline & French Laboratories; International Flavors & Fragrances Inc.; Kimberly Clark Corp.; Viacom International Inc.; Federal Reserve Bank of Cleveland; Ohio Bell Telephone Co.; Provident Mutual Life Insurance of Philadelphia, Continental Oil Co.; Allied Chemical Canada Ltd.; Brascan Ltd.; Canada Life Assurance Co.; Falconbridge Nickel Mines Ltd.; Ford Motor Co. of Canada; Magnum Fund Ltd.; TransCanada Pipelines Ltd.; American Re-Insurance Co.; Phillips Petroleum Co.; Girard Bank; I-T-E Imperial, among others.

Campbell's

REGULAR CONSUMER SOUPS
FROZEN SOUPS
•FOOD SERVICE SOUPS
BEAN PRODUCTS
TOMATO JUICE
•READY-TO-SERVE SAUCES
•READY-TO-SERVE CANNED ENTREES

FRANCO-AMERICAN

SPAGHETTI PRODUCTS
SPAGHETTIOS PRODUCTS
MACARONI PRODUCTS
SAUCES
GRAVIES

PEPPERIDGE FARM

BREAD AND ROLLS
STUFFING
COOKIES
"GOLDFISH" CRACKERS
FROZEN PASTRIES
LAYER CAKES

V-8 COCKTAIL VEGETABLE JUICE

Bounty

GODIVA

SWANSON

FROZEN PREPARED FOODS
DINNERS
ENTREES
BREAKFAST
MEAT PIES

CANNED POULTRY PRODUCTS

Kia-ora

GRANNY'S

EFFICIENC

*Prepared especially for food service establishme

PRINCIPAL PLANTS

UNITED STATES

ARKANSAS—Fayetteville
CALIFORNIA—Modesto, Sacramento
CONNECTICUT—Norwalk
DELAWARE—Clayton
GEORGIA—Cairo
ILLINOIS—Chicago, Downers Grove
INDIANA—Saratoga
MARYLAND—Chestertown, Pocomoke City, Salisbury
MINNESOTA—Worthington
NEBRASKA—Fremont, Omaha, Tecumseh
NEW JERSEY—Camden, Parsippany
OHIO—Napoleon
PENNSYLVANIA—Bloomsburg, Downingtown
SOUTH CAROLINA—Sumter
TEXAS—Paris

CANADA

MANITOBA—Portage la Prairie
ONTARIO—Chatham, Listowel, St. Marys, Toronto

OTHER COUNTRIES

AUSTRALIA—Shepparton
BELGIUM—Vilvoorde
ENGLAND—King's Lynn
FRANCE—Nieppe
ITALY—Felegara
MEXICO—Villagran

PRINCIPAL SUBSIDIARIES

Campbell Sales Company
Champion Valley Farms, Inc.
Clark corporations
Godiva Chocolatier, Inc.
Herfy's Corporation
Joseph Campbell Company
Pepperidge Farm, Incorporated
W. L. Wheatley, Inc.
Biscuits Delacre S. A. (Belgium)
Campbell Soup Company Ltd (Canada)
Campbell's de Mexico, S.A. de C.V. (Mexico)
Campbell's Soups (Aust.) Pty. Limited (Australia)
Campbell's Soups Limited (Great Britain)
Campbell's Soups S.p.A. (Italy)

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CARNATION COMPANY

5045 Wilshire Boulevard, Los Angeles, California 90036

Financial Profile

Market Value:	(123)	$ 867,814,000
Revenues:	(159)	$1,053,358,000
Assets:	(489)	$ 536,261,000
Net Profit:	(183)	$ 45,883,000

Chief Executive: H.E. Olson
Total Remuneration: $128,333
Value of Shares Owned/Controlled By: $738,000

Physical Profile

No. of Employees: 19,000

Major U.S. Facilities - see following page

Carnation's Principal U.S. Products

UNITED STATES
Evaporated Milk: CARNATION, MORNING, GOLD CROSS brands
TOPIC Filled Milk
PRAISE Non-Dairy Creamer (Institutional)
CARNATION Instant Nonfat Dry Milk
CARNATION Instant Breakfast
SLENDER Diet Food
COFFEE-MATE Non-Dairy Creamer
CARNATION Hot Cocoa Mix
CARNATION Malted Milk Products
TRIO Dehydrated Potatoes (Institutional)
RICH'NING Non-Dairy Coffee Creamer (Institutional)
CHEF-MATE Foods (Institutional)
WHIP-MATE Topping Mix (Institutional)
TRIO Gravy Mixes (Institutional)
TOPIC Non-Dairy Coffee Creamer (Institutional)
Frozen Potato Products
THE SPREADABLES Sandwich Spreads
CARNATION and BRENTWOOD Fresh Milk, Ice Cream and Cottage Cheese
Frozen Novelties
CARNATION Yogurt and Dips
CONTADINA Tomato Products: Paste, Sauce, Puree, Stewed, Canned Whole Tomatoes, Sliced Baby Tomatoes, Pizza Sauce
CONTADINA COOKBOOK SAUCES
CONTADINA Canned Fruit (Institutional)
FRISKIES Canned Dog Foods
FRISKIES Canned Cat Foods
BUFFET Cat Food
FRISKIES Mix and Sauce Cubes for Dogs
LITTLE FRISKIES Dry Cat Food
FRISKIES Puppy Food
ALBERS Flapjack Pancake Mix
ALBERS Corn Meal
CARNATION Brewers Grits
ALBERS Poultry Feeds
ALBERS Dairy and Beef Feeds
ALBERS Calf Manna Calf Feed
ALBERS Horse Feeds
ALBERS Specialty Feeds and Feeding Equipment
ALBERS Grains and Concentrates
MAN O' WAR Horse Care Products
TEMPER Grain Conditioner
Eggs
Turkeys
Cans

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Interconnecting Directorships

United California Bank; Wilmington Trust Co.; FMC Corp.; Kidder, Peabody & Co., Inc.; Security Pacific National Bank; Pacific Mutual Life Insurance; Getty Oil Co.; Southern California Edison, among others.

EVAPORATED MILK

Condenseries

California: Gustine
Colorado: Johnstown
Illinois: Oregon
Kentucky: Maysville
Michigan: Sheridan
Mississippi: Tupelo
Missouri: Mt. Vernon
New York: South Dayton
North Carolina: Statesville
Pennsylvania: Cambridge Springs
Tennessee: Murfreesboro
Texas: Sulphur Springs
Virginia: Galax
Washington: Mt. Vernon
West Virginia: Clarksburg

Receiving Stations

Arkansas: Harrison
California: Chico, Turlock
Kentucky: Mt. Sterling, Danville, Campbellsville, Glasgow, Somerset
Maryland: Oakland
Michigan: Barryton
Mississippi: Baldwyn
Missouri: Ava, El Dorado Springs, Seymour
North Carolina: Albemarle, Monroe, Shelby
Pennsylvania: Corry
Tennessee: Manchester, Sparta, Watertown
Virginia: Riner, Stuart
West Virginia: Cameron

CAN MANUFACTURING

California: Gustine, Riverbank
Canada: Aylmer (Ontario)
Idaho: Nampa
Kentucky: Maysville
Missouri: Mt. Vernon
Oregon: Hillsboro
Pennsylvania: Cambridge Springs
Texas: Mansfield
Washington: Mt. Vernon
Wisconsin: Oconomowoc, Waupun, Menomonee Falls

PROTEIN ISOLATE PLANT

Ohio: Coshocton

CONTADINA FOODS

California: Riverbank, San Jose, Woodland

McGRAW COLORGRAPH

California: Burbank

TRENTON FOODS

Missouri: Trenton

DAYTON RELIABLE TOOL & MFG. CO.

Ohio: Dayton

CARNATION PROCESSED POTATOES (PRONTO PACIFIC)

Washington: Moses Lake

FRESH MILK AND ICE CREAM

Milk and Ice Cream Plants

Arizona: Phoenix*
California: Bakersfield, Glendale, Los Angeles*, Oakland, San Diego*
Iowa: Waterloo
Oklahoma: Tulsa
Oregon: Portland
Texas: Houston, San Antonio, Wichita Falls*
Washington: Seattle, Spokane, Sunnyside

By-Products Plants

California: Fullerton, Stockton
Texas: Schulenburg

Distribution Branches

Arizona: Flagstaff, Tucson, Yuma
California: Fontana, Fresno*, Indio, Lancaster, Long Beach, Oceanside, Sacramento*, Santa Clara, Santa Maria, San Mateo, Stockton, Van Nuys, Ventura, Victorville
Idaho: Moscow
Iowa: Fort Dodge, Mason City, Oelwein, Waverly
Nevada: Reno
Oklahoma: Muskogee*, Oklahoma City
Oregon: Eugene, Pendleton, Salem, The Dalles
Texas: Austin, Beaumont*, Dallas, Fort Worth**, Freeport, Lubbock*, Texas City, Victoria
Washington: Bremerton, Richland, Tacoma, Walla Walla, Yakima

*Retail Ice Cream Stores in addition
**Retail Stores only

PET FOODS AND CEREALS

California: Oakland
Missouri: St. Joseph
Oregon: Hillsboro
Utah: Ogden
Wisconsin: Jefferson

By-Products Processing Plants

Arkansas: Springdale
Washington: Seattle

ALBERS MILLING

Mills

California: Beaumont, Fresno, Red Bluff, Santa Rosa, Stockton
Colorado: Ft. Lupton
Hawaii: Honolulu
Missouri: Kansas City
Oregon: McMinnville, Portland
Washington: Bellingham, Tacoma

Poultry Ranches and Egg Processing Plants

California: Santa Rosa, Windsor
Colorado: Brighton, Henderson
Hawaii: Honolulu, Waianae, Ewa
Oregon: Logan, Mt. Angel
Washington: Auburn, Tenino

INSTANT PRODUCTS

Illinois: Jacksonville
Iowa: Waverly (two plants)
Wisconsin: Chilton, Oconomowoc

CARNATION FARMS

Registered Holstein and Polled Hereford Farm, Albers Research Farm, Dog Kennels and Cattery
Washington: Carnation

Breeding Service

Washington: Carnation
Wisconsin: Watertown

RESEARCH LABORATORIES

California: Van Nuys

DISTRIBUTION CENTERS

California: Stockton
Illinois: Rochelle
Indiana: Fort Wayne
Kansas: Elwood
Pennsylvania: Mechanicsburg

CASTLE AND COOKE, INC.

Drawer 2990, Honolulu, Hawaii 96802

Financial Profile

Market Value:	(467)	$248,132,000
Revenues:	(333)	$496,950,000
Assets:		$447,362,000
Net Profit:	(431)	$ 17,625,000

Chief Executive: M. MacNaughton
Total Remuneration: $178,000
Value of Shares Owned/Controlled By: $2,336,000

Physical Profile

No. of Employees: 34,000

Subsidiaries and Divisions:
Dole Co., Bumble Bee Seafoods, California and Hawaiian Sugar Co., Royal Hawaiian Macadamia Nut Co., Oceanic Properties (California's Sea Ranch), Barclay Hollander Curci, Ames Mercantile, Arneson Products, Hawaiian Equipment, Republic Glass, Thai-American Steel, Castle & Cooke Terminals, Computer Services, PLAN (international agribusiness management and consulting service), Castle & Cooke East Asia, Standard Fruit and Steamship Co. (which controls 37% of the North American banana market).

Operation Notes

ASCS Subsidies

1966	Waialua Agricultural Co. Ltd.....	$516,520
	Ewa Plantation Co.....	$458,220
	Kohala Sugar Co.....	$420,019
1967	Waialua Agricultural Co. Ltd.....	$600,477
	Ewa Plantation Co.....	$486,233
	Kohala Sugar Co.....	$800,718
1970	Waialua Sugar Company.....	$1,111,060
	Kohala Sugar Co.....	$383,958
		$4,777,205

Interconnecting Directorates

Wells Fargo Bank, N.A. (3); Safeway Stores Inc.; Hewlett Packard Co.; Utah Construction & Mining Co.; Owens-Illinois Inc.; Stanford Research Institute, Honolulu Star Bulletin, Newhall Land and Farming Co.; Bank of Hawaii; Hawaiian Airlines Inc. (3); Hawaiian Trust Co., Ltd.(4); Andrade & Co., Ltd.; First Insurance Company of Hawaii (3); Hawaiian Telephone Co. (2); Pacific Resources Inc.; Gasco Co.; Latin American Agribusiness Development Corp.; Valencia Water Co.; Fillmon-Piru Citrus Association; Ventura County Citrus Exchange; Sunkist Growers, Inc.; Las Pasas Orchard; Hawaiian Secutiries & Realty Ltd; Magoon Bros.; Cox Broadcasting Corp.; Magoon Development Corp.; Pacific Lumber Co.; Pope & Talbot, Watkins-Johnson Co.; General Electric; Hawaiian Electric Co.; Molokai Ranch Ltd; Kaluaki Corp.; First National Bank of Oregon; Pacific Power & Light Co.; Sacramento Sky Ranch [illegible]

CONSOLIDATED FOODS CORPORATION

135 South LaSalle Street, Chicago, Illinois 60603

Financial Profile

Market Value:	(107)	$992,503,000
Revenues:	(89)	$1,570,170,000
Assets:	(374)	$726,099,000
Net Profit:	(147)	$ 54,674,000

Chief Executive: W.A. Buzick Jr.
Total Remuneration: $162,000
Value of Shares Owned/Controlled By: Not Available

Physical Profile

No. of employees: 60,000

Subsidiaries and Divisions

Azar Nut Company
Azar *shelled and processed pecans and nuts.*

Delson Candy Company
Merri-Mints, Thin Mints, Fruit Creams *and* Hacks *cough drops.*

Hollywood Brands
Payday, Butternut, Milk Shake, Zero, Hollywood *and 747 candy bars.*

Popsicle Industries
John Lewis, Inc.
Popsicle, Fudgsicle, Creamsicle, Dreamsicle, Cherio *and* Swinger *frozen confections; packaging for frozen confections.*

Shasta Beverages
Shasta *carbonated soft drinks.*

Booth Fisheries
Booth *frozen and processed fish and seafood.*

Idaho Frozen Foods,
Rus-Ettes *frozen potato products.*

Kitchens of Sara Lee
Sara Lee *frozen baked goods and convenience foods.*

Ocoma Foods Company
Ocoma *frozen and processed poultry products; prepared convenience dinners.*

Monarch Institutional Foods

Pearce-Young-Angel Company
Foods and related items for volume feeding operations.

(Continued on following page)

Operation Notes

Union Sugar Company owns 11,000 acres of land in California and 745,000 shares of Consolidated Foods Corp.
Amerine Turkey Breeding Farms, Inc. (Oakdale, Calif.) owns 3000 acres of land at six locations in the San Joaquin Valley

Interconnecting Directorates

Bankamerica Corp.; Bank of America N.T. & S.A.; Time Inc., Conill Corp.; Broadway Hale Stores Inc.; Di Giorgio Corp.; Kaiser Industries Inc.; Standard Oil of California; Wells Fargo Bank; Heller, Ehrman, White & McAuliffe (law); Rothschild Enterprises Inc. (investments), among others.

Aris Gloves

Aris *ladies gloves for dress and sports;* Isotoner *Body Suit;* Hands Beautiful *cosmetic gloves.*

Canadian Lady-Canadelle

Wonder Bra *ladies foundation garments, lounge and swimwear.*

Country Set

Country Set *women's sports and casual wear;* Point Set *tennis garments.*

Gant Shirtmakers

Gant *shirts for men.*

Kates Limited
Pert Knitting Limited

Kates, Pert *knitwear for women and children.*

Pulitzer Tiemakers

Pulitzer *ties and shirts.*

Russel Taylor

Russel Taylor *coats of simulated fur for men and women.*

Sirena

Sirena *ladies swimsuits, beach dresses and coverups.*

Bloch and Guggenheimer

B & G *pickles, relishes and sauerkraut.*

Coastal Foods Company

Phillips, Gibbs *canned pork and beans, franks and beans; canned and condensed soups.*

Michigan Fruit Canners, Inc.

Thank You *puddings, pie fillings, fruit crisps, spiced fruit, juices and vegetables.*

Union Sugar Division

Union *refined sugar.*

Van Wagenberg-Festen's (Holland)

Jonker Fris *fruits, vegetables and jellies.*

Plasti-Kote

Plasti-Kote, Easy Way, Mr. Spray and E-Z Kote *spray paint aerosol products including cleaners and lubricants; paint brushes.*

Spectrum Fabrics

Spectrum *fabrics for home decorating and furnishing.*

Tyco Industries

Tyco *electric trains and roadracing sets.*

Bryan Packing Company

Bryan Brothers *fresh, smoked, processed and canned meat products.*

The E. Kahn's Sons Company

Kahn's and Hickory Grove *fresh, smoked and processed meat products.*

Lawson Milk Company

Convenience stores in Ohio, Pennsylvania and Michigan Production of Lawson brand food products sold in these stores.

Lawson Restaurants and Motels

L & K Restaurants and Motels

Lyons Restaurants

Manners Restaurants

Family styled restaurants and motels.

Abbey Rents

Rental and sale of party supplies and convalescent equipment; rental of furniture.

Cosco Industries

Marking devices, pricing equipment, labels, printing services, packaging, office supplies, badges and uniforms and advertising specialties.

Olympic Manufacturing Company

Equipment and supplies used to chemically clean and sanitize trucks, rail cars, airplanes and other types of commercial vehicles.

Oxford Building Services

Maintenance and security for commercial and industrial facilities; Cut N' Care *services for grounds.*

Oxford Chemicals

Chemicals used in cleaning, sanitizing and bacteriological control in commercial and industrial facilities.

Authentic Furniture Products
B. P. John Furniture
Gem Furniture
Good Tables

Authentic, B. P. John, Gem *and* Good Tables *chairs and dinettes, upholstered furniture, occasional tables, desks and bedroom furniture.*

Conso Products Company

Conso *trimmings and accessories for home decorating and sewing.*

Conso Publishing Company

"1001 Decorating Ideas"; "1001 Fashion and Needlecraft Ideas".

Electrolux

Electrolux *vacuum cleaners, floor polishing and carpet shampooing equipment and supplies.*

The Fuller Brush Company

Fuller *brushes, brooms and other cleaning accessories; cosmetic aids for the entire family.*

The Graber Company

Graber *drapery hardware and window decorations.*

CROCKER NATIONAL CORPORATION (Crocker Citizens National Bank)

One Montgomery Street, San Francisco, California 94120

Financial Profile

Market Value:	(363)	$ 362,212,000
Revenues:	(399)	$ 400,836,000
Assets:	(32)	$6,032,451,000
Net Profit:	(250)	$ 34,176,000

Chief Executive: E.G. Solomon
Total Remuneration: $161,000
Value of Shares Owned/Controlled By: $136,000

Shareholders: 17,662 10,452,277 average number of shares outstanding

Physical Profile

No. of employees: 9,000

Subsidiary - Crocker McAlister Equipment Leasing Inc.

Operation Notes

"Bank Trust Department administers large Southern California ranch"
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Interconnecting Directorates

Bechtel Corp.; General Motors; Southern Pacific Co.; Bekins Company, Berry Oil Company; Caterpillar Tractor Co.; Del Monte Corp. (4); Yosemite Park and Curry Co.; Max Factor & Co.; Precision Instrument Co.; Broadway-Hale Stores Inc.; Levi Strauss & Co.; Fibreboard Corp.; Pacific Telephone and Telegraph Co. (3); New York Life Insurance Co.; Johnson, Bannon, Wohlwend and Johnston (law); Sears Roebuck & Co.; Standard Oil of California; Moore Dry Dock Co.; FMC Corp.; Marcona Corp.; Pacific National Life Assurance Co.; Norton Simon; Gibson, Dunn & Crutcher (law); Pacific Mutual Life Insurance Co.; Pacific Gas and Electric Co.; Di Giorgio Corp.; Pacific Lighting Corp.; Alaskan Packers Association Inc.; Canadian Canners Ltd.; Stanford Research Institute, among others.

DEL MONTE CORPORATION

215 Fremont Street, San Francisco, California 94119

Financial Profile

Market Value:	(401)	$303,515,000
Revenues:	(254)	$681,492,000
Assets:	(479)	$545,784,000
Net Profit:		$ 14,361,000

Chief Executive: A.W. Eames Jr.
Total Remuneration: $110,000
Value of Shares Owned/Controlled By: $571,000

Stockholders: 22,936 11,787,000 average number of shares outstanding

Physical Profile

No. of employees: 22,000

Del Monte Corp. and subsidiaries, operating facilities and services, and Del Monte Products - see following page.

Operation Notes

Own 32,000 acres and lease another 77,600 acres
Canned fruits and vegetables account for 60-65% of their sales
1100 salesmen in 56 sales offices throughout the United States
70 brokers distribute Del Monte products to institutions
In 1968 Del Monte spent $10 million in advertising, 70% of the amount going for television commercials.
Del Monte contracts with approximately 10,000 independent growers each year

UPWARD INTEGRATION - "Earlier I described how Del Monte integrated its operations downward, from the cannery to the field. But this, too, is a form of vertical integration --- the integration of the food processor upward to the service of the consumer. And the closer we come to this "perfect" integration --- to understanding and serving the individual consumer's needs --- the more interesting and challenging our business becomes."
- A.W. Eames Jr., May 27, 1971

Interconnecting Directorates

Bank of California, N.A. (4); Crocker National Corp. (4); Caterpillar Tractor Co. (2); Broadway-Hale Stores Inc. (2); Wells Fargo & Co. (2); Pillsbury, Madison and Sutro (law), Pacific Gas and Electric Co. (2); Yosemite Park and Curry Co.; Pacific Mutual Life Insurance Co.; American Telephone & Telegraph Co.; Western Bancorporation; Illinois Central Industries; Utah Construction and Mining Co.; Fireman's Fund American Insurance Co.; Wynterwade & Partners (foreign investments); FMC Corp.; Pacific Lighting Corp.; Southern California Edison Co., Transamerica Corp.; Alaskan Packers Association Inc.; University of San Francisco; General Electric; Pima Mining Co.; Hewlett Packard Co.; First Security Corp.; Chrysler Corp.; Amfac, Inc.; American Express; Middle South Utilities, Itel Corp., among others.

Del Monte Corp. and subsidiaries

Domestic Operations

CANNED FOOD DIVISION
- California
- New Jersey
- Florida
- Hawaiian
- Midwest
- Mountain States
- Northwest
- Southwest

DRIED FRUIT DIVISION

SPECIALTY FOOD DIVISIONS

SUBSIDIARY COMPANIES
- Alaska Packers Assoc., Inc.
- Calpak Properties, Inc.
- West Sacramento Port Cntr., Inc.
- Distribution Systems, Inc.
- Granny Goose Foods, Inc.
- O'Brien, Spotorno, Mitchell
- Service Systems Corp.
- West Indies Fruit Co.

International Operations

Belgium	Kenya
Brazil	Mexico
Canada	Panama
Costa Rica	Puerto Rico
Ecuador	Philippines
France	South Africa
Guatemala	United Kingdom
Italy	Venezula
Japan	

Operating Facilities & Services

FOOD PROCESSING PLANTS	D	I	Total
Canned Foods	38	21	59
Dried Fruits	3	-	3
Snack Foods	4	4	8
Specialities and Frozen Foods	6	1	7
RELATED FACILITIES			
Alcohol & Vinegar	2	2	4
Apricot Pit & Kernal	1	-	1
Banana Freighters	-	6	6
Banana Terminals	3	1	4
Can Manufacturing	11	3	14
Canning Machinery	-	1	1
Cattle Feeding	5	1	6
Distribution Centers	9	1	10
Farms, Ranches, etc.	28	12	40
Label Printing	1	-	1
Research Labs	4	1	5
Seed Farming & Process	6	1	7
Tuna Freezing & Storage	-	1	1
Tuna Transport Vessels	-	6	6

Operating Facilities & Services

PUBLIC TRANSPORATION FACILITIES	D	I	T
Air Freight Forwarding	14	-	14
Ocean Terminal	1	-	1
Trucking Operations	4	1	[illegible]
Warehousing	4	-	[illegible]
OTHER SERVICES & ACTIVITIES			
Building Maintenance	238	6	24[illegible]
Food Service Accounts	617	-	61[illegible]
Food Vending Accounts	218	-	21[illegible]
Land Sites (Development)	2	-	[illegible]
Public Restaurants	24	-	2[illegible]

Del Monte Products

- Canned Fruits
- Canned Vegetables
- Canned and Packaged Specialities
- Canned Juices, Juice Drinks, Fruit Drinks, Nectars
- Canned Seafood
- Pickles and Pickle Products
- Dried Fruits
- Fresh Produce
- Frozen Food Specialties
- Prepared Potato Products
- Snack Foods

D = Domestic
I = International

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THE DI GIORGIO CORPORATION

One Maritime Plaza, San Francisco, California 94111

Financial Profile

Market Value:		$ 54,379,000
Revenues:	(434)	$365,606,000
Assets:		$168,506,000
Net Profit:		$ 3,195,000

Chief Executive: Robert Di Giorgio
Total Remuneration: $120,000
Value of Shares Owned/Controlled By: $295,000

Physical Profile

No. of employees: 4,000

Divisions - see following page

Brands: White Rose, Redi-Tea, Met, Treasure Valley, Ladco, Filper Pitter, Fil-Per-Pak, TreeSweet, Caveman, Roadrunner, Californian, Bell, Siesta

In 1970 DiGiorgio's operating profits were derived from these sources:

Consumer Products:	
Distribution	35%
Food Packaging and Equipment Manufacturing	16%
Specialty Foods and Products	30%
Leisure Products	- 6%
Land Resources and Shelter:	
Forest Products and Housing Components	21%
Agriculture and Land Use	4%

Operation Notes

ASCS Subsidy Payments:

1968	$63,561
1967	$82,194
1966	$56,100
	$201,855

Interconnecting Directorates

Pacific Telephone and Telegraph Co. (2); Bankamerica Corp. (2); Bank of America N.T. & S.A. (3); Broadway-Hale Stores Inc. (2); Standard Oil of California; Bank of California, N.A.; Cahill Investment Co.; Pacific National Life Assurance Co.; Union Oil Co. of California; Unionamerica Inc.; Union Oil Co. of Canada Ltd.; New York Life Insurance Co.; Crocker National Corp.; C.L. Peck Co.; Time Inc.; Kaiser Industries; Consolidated Foods Corp.; Newhall Land and Farming Co., among others.

DISTRIBUTION OF FOODS, DRUGS AND SUNDRIES

Metropolitan New York:	Groceries, Frozen Foods, Produce, Fresh Fruits
Philadelphia:	Produce, Fresh Fruits
Mountain States:	Groceries, Frozen Foods, Produce, Drugs and Sundries
San Francisco Bay Area:	Shippers and Commission Sales Agents for Fresh Fruits and Produce
Los Angeles, Northern & Southern Calif.:	Ethical and Proprietary Drugs, Toiletries and Sundries, Candy
Data Processing Services:	New York, Los Angeles, San Francisco, Boise, Idaho

FOOD PACKAGING AND EQUIPMENT MANUFACTURING

Portion-Packaged Foods: *Market Area: U.S.*	Plants in California and Ohio
Food Packaging and Processing Equipment: *Market Area: U.S., Europe, Australia, South Africa*	Plants in California, New York, Australia, South Africa

FOREST PRODUCTS AND HOUSING COMPONENTS

Lumber & Sawmill Operations:	Six Mills - Oregon & Northern California
Millwork & Remanufacturing:	Seven Mills - Northern California
Pre-cut & Sub-assembled Houseframe Components:	One Mill - Northern California
Soil Amendment Products:	Six Plants - California & Arizona; Oregon and California sawmills
Aluminum Construction Components --Doors, Windows, Frames	Two Plants - Southern California

LEISURE PRODUCTS

Recreational Vehicles & Accessories: *Market Area: Western U. S.*	Plants in California (3), Oregon, Montana, Utah
Casual Furniture: *Market Area: U.S., Canada, Europe*	Plants in New York, California, Philippines, Hong Kong

AGRICULTURE AND LAND USE

Citrus Production:	Indian River, Florida - 5,200 acres of premium-grade Oranges, Grapefruit, Tangerines
Pear and Plum Production:	Marysville, California - 2,500 acres
Borrego Springs, California:	7,000 acres - Condominium Apartments, Mobile Home Park, Shopping Mall, Golf Course
Danville, California:	233 acres - Sycamore Residential Community - Detached & Townhouse Residences, Recreation Facilities
Tahoe City, California:	17 acres - Star Harbor - Resort Condominiums

SPECIALTY FOODS AND PRODUCTS

Citrus and Other Juice Products: *Market Area: U.S., Canada, Europe*	Plants in California (2), Florida and Holland
Specialty Meats and Snack Foods: *Market Area: Atlantic States, Selected metro markets*	Plant in Massachusetts
Plastic Cutlery: *Market Area: U.S.*	Plants in California and Texas
Candy: *Market Area: European Common Market, U. S.*	Plant in Belgium

SUMMARY

Diversifying from the base of agricultural operation which in 1957 provided 100% of its operating earnings, D Giorgio has effectively realigned its activities into two fas growing, more dynamic lines of business: consumer pro ducts (currently 75% of operating profit); land resource and shelter (25%).

- 1970 DiGiorgio Corp. Dir

DOW CHEMICAL COMPANY

Midland, Michigan 48640

Financial Profile

Market Value:	(38)	$2,223,770,000
Revenues:	(62)	$1,911,105,000
Assets:	(76)	$2,779,802,000
Net Profit:	(57)	$ 103,387,000

Chief Executive: C.B. Branch
Total Remuneration: $103,012
No. of Shares Owned/Controlled By: 10,235

Physical Profile

No. of employees: 47,000

Divisions - see following page

Brands: Tordon, Dowpon, Premerge, Tavron, Ruff-Tabs, Trycite (polystyrene film), Kedlor, Coyden, Zoamix, Dursban, Zectran, Saran Wrap, Handi-Wrap, Dow Oven Cleaner, Dow Bathroom Cleaner, Phenoxy herbicides (2,4-D and 2,4,5-T)

Dow and Swift & Co. are the principal stockholders in Consolidated Fertilizers, Ltd. (Australia)

Operation Notes

In 1969 (July) Dow bought 17,000 acres in Arizona and California from the Bud Antle Inc. for $5 million plus (largely in Pinal and Pima counties) - see "Corporation Farming" on following page
- -Leased 3000 acres back to Antle in 1970
- -C.F. Weaver, president and board member of Dow Chemical Finance Corp. (maker of commercial loans and a subsidiary of Dow Chemical Co.) is a board member of Bud Antle Inc.
- -Dow began making lettuce wrappers for Antle in 1961
- -Sells Antle pesticides
- -Partners with Antle in a styrofoam container company in California.

Interconnecting Directorates

University of California (chemistry); National Bank of Detroit; Dundee Cement Co.; Dow Corning Corp. (4); National City Bank of Cleveland; Chemical Bank and Trust Co. (Midland, Mich.) (4); Chase Manhattan, American Research and Development; First National Bank and Trust Co. (Midland, Mich.) (2); Citizens Bank and Trust Co. (Claire, Mich.); Second National Bank of Saginaw; Peoples National Bank and Trust (Bay City, Mich.); Michigan Bell Telephone Co., among others.

The Dow Chemical Company

CORPORATE HEADQUARTERS: MIDLAND, MICHIGAN

UNITED STATES AREA/ Earle B. Barnes, General Manager

Headquarters: Midland, Michigan

SALES OFFICES IN 24 CITIES o 29 MANUFACTURING LOCATIONS IN 18 STATES: *Arizona* Tucson • *Arkansas* Russellville • *California* Fresno, Pittsburg, Torrance • *Colorado* Denver, Golden • *Connecticut* Gales Ferry • *Georgia* Dalton • *Hawaii* Honolulu • *Louisiana* Plaquemine • *Michigan* Bay City, Ludington, Midland • *Minnesota* Biwabik • *Missouri* Cape Girardeau, Pevely • *New Jersey* Carteret • *Ohio* Cleveland, Findlay, Ironton, Newark • *Oklahoma* Tulsa • *Pennsylvania* Royersford • *Texas* Freeport, Oyster Creek • *Utah* Ogden (under construction) • *Washington* Dallesport (under construction) o PRINCIPAL PARTLY OWNED COMPANIES*: Dolco Packaging Corp., Los Angeles, California • Dow Badische Company, Williamsburg, Virginia • Dow Corning Corporation, Midland, Michigan • The Kartridg Pak Co., Davenport, Iowa.

DOW CHEMICAL EUROPE S.A./ Zoltan Merszei, President

Headquarters: Zurich, Switzerland

OFFICES IN 18 CITIES o 14 MANUFACTURING LOCATIONS IN 8 COUNTRIES: *France* Drusenheim • *Germany* Greffern; Stade (under construction) • *Greece* Lavrion • *Italy* Livorno • *The Netherlands* Rotterdam, Terneuzen • *Spain* Barcelona, Bilbao, Santander, Tarragona • *Sweden* Norrkoping (under construction) • *United Kingdom* King's Lynn, England; Barry, Wales o PRINCIPAL PARTLY OWNED COMPANIES*: Compagnie des Services Dowell Schlumberger, Paris, France • Dowell Schlumberger Corporation, London England • Lurex N.V., Amsterdam, The Netherlands • Phrix-Werke A.G., Hamburg, Germany.

DOW CHEMICAL OF CANADA, LIMITED/ LeRoy D. Smithers, President

Headquarters: Sarnia, Ontario

SALES OFFICES IN 6 CITIES o 10 MANUFACTURING LOCATIONS IN 4 PROVINCES: *Alberta* Edmonton, Fort Saskatchewan • *British Columbia* Ladner • *Ontario* Don Mills, Thunder Bay, Sarnia, Toronto, Weston • *Quebec* Montreal, Varennes.

DOW CHEMICAL LATIN AMERICA S.A./Dave W. Schornstein, President

Headquarters: Coral Gables, Florida

OFFICES IN 11 CITIES o 10 MANUFACTURING LOCATIONS IN 5 COUNTRIES: *Argentina* Buenos Aires, San Lorenzo • *Brazil* Santos (under construction), São Paulo (two locations) • *Chile* Concepción, Santiago • *Colombia* Bogotá, Cartagena • *Mexico* Mexico City o PRINCIPAL PARTLY OWNED COMPANIES*: Atanor S.A.M., Buenos Aires, Argentina • Poliolefinas Colombianas S.A., Bogotá, Colombia.

DOW CHEMICAL PACIFIC LIMITED/ Robert W. Lundeen, Managing Director

Headquarters: Hong Kong

OFFICES IN 14 CITIES o MANUFACTURING OPERATIONS IN *Australia* Altona, Rhodes, Smithfield o PRINCIPAL PARTLY OWNED COMPANIES*: Asahi-Dow Limited, Tokyo, Japan • Austral-Pacific Fertilizers, Brisbane, Australia • Ivon Watkins-Dow Limited, New Plymouth, New Zealand • Korea Pacific Chemical Corporation, Ulsan, Korea • Pacific Chemicals Berhad, Kuala Lumpur, Malaysia • Polychem Limited, Bombay, India.

LIFE SCIENCES DEPARTMENT/ William R. Dixon, General Manager

Headquarters: Midland, Michigan

INDIANAPOLIS DIVISION (*Rx Pharmaceuticals, Generic Pharmaceuticals, Diagnostics, Environmental Bio Engineering*), Indianapolis, Indiana • Gruppo Lepetit, S.p.A., Milan, Italy • Bio-Science Laboratories, Van Nuys, California • Laboratorios Industriales Farmaceuticos Ecuatorianos, S.A., Quito, Ecuador • Photovolt Corporation, New York, New York o PRINCIPAL PARTLY OWNED COMPANIES*: Bioscientia Klinisch-Diagnostisches Institut GmbH, Ingelheim am Rhein, Germany • Cordis Dow Corp., Miami, Florida • Medical Laboratory Automation, Inc., Mt. Vernon, New York • Nova Quest, Los Altos, California

* Companies in which Dow's interest is substantial but less than a majority and whose results are not consolidated in Dow's financial statements.

Corporation
Farming

Changes taking place
Arizona were recently pinpointed
the Arizona Farmer-Ranchman in
issue of October 18, 1969. I want
commend this perceptive article to
Members of the House:

CORPORATION FARMING—WHY?

Something is happening to Ameri
agriculture that is bound to have profo
effects on the future of our country,
probably not for the better.

That is corporation farming, widely
versified as to both products and locali

The USDA has issued reassuring rep
to point out that the farmland acquired
powerful corporations, previously in
ferent and unrelated fields, is only a s
fraction of the total. That is true, but
a trend is definitely indicated and the
dence may be stronger in Arizona than
where.

The latest example of this trend is
take-over of Bud Antle, Inc., by the
Chemical Co. It involves 14,000 acres, lar
in Pinal and Pima Counties but with o
blocks extending into California as fa
Salinas.

It is easy to say that Antle became o
extended on money borrowed from
and that Dow had to assume control or
chances in an involved bankruptcy proc
ing. That theory does not look so rea
able when closely examined. Certainly A
did expand to an extent that would
been overexpansion for him, but it is
likely that Dow would have bankrolled
in that program. More likely it was
planned in advance, with the take-ove
follow when enough acreage had been
quired. Dow had decided to get into agr
ture, and did so through Antle.

Lurex, until a year or so ago a m
widely of bleacher and
bought two of
shippers

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F M C CORPORATION

P.O. Box 760, San Jose, California 95106

Financial Profile

Market Value:	(158)	$ 741,390,000
Revenues:	(113)	$1,330,494,000
Assets:	(272)	$1,031,760,000
Net Profit:	(133)	$ 58,803,000

Chief Executive: Jack M. Pope
Total Remuneration: $174,000
Value of Shares Owned/Controlled By: $523,000

Stockholders: 43,000 31,053,000 average number of shares outstanding

Source of Sales: Ordinance..... 12.9% Fiber and Film 23.6%
Chemical..... 21.7% Machinery 41.8%

Physical Profile

No. of employees: 47,000

FMC Operations and Products - see following page

Operation Notes

Leading supplier of fresh fruit and vegetable preparation equipment.

Subsidiary Niagara Chemical Co. conducted a series of controversial pesticide tolerance tests on farm workers in the San Joaquin Valley in the late summer of 1970. For complete details contact Agribusiness Accountability Project, 1000 Wisconsin Avenue NW, Washington,D.C. 20007. The Project has a detailed study and evaluation of these tests.

In Fall, 1971 the Lindsay manufacturing plant of the FMC Corp. Riverside Division completely refitted a new citrus packing and shipping plant in Terra Bella, California belonging to W.D. Fowler and Sons (a subsidiary of Pacific Lighting Corp. - see page 46). Complete details in The Packer, December 18, 1971.

Interconnecting Directorates

Kidder, Peabody & Co., Inc.; Carnation Co.; Bank of California, N.A.; Western Pacific Railroad Co. (2); Crocker National Corp.; Lehman Bros. Inc. (investment bankers); IBM Corp., Pillsbury, Madison and Sutro (law); Giffen, Inc.: Pacific Gas & Electric Co. (2); Wells Fargo & Co.; Georgia Pacific Corp.; Hewlett-Packard Co.; Del Monte Corp.; Southern Pacific Co.; Caterpillar Tractor Co.; Chase Manhattan Corp.; Ketchikan Pulp Co., among others.

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FMC Operations & Products

MACHINERY GROUP

BOLENS DIVISION: Port Washington, Wisconsin
Compact tractors, rotary tillers, lawn mowers, snow casters, snow vehicles
CANNING MACHINERY DIVISION: San Jose, California
Food preparation & processing equipment, mechanical harvesters, frozen confection equipment
CENTRAL ENGINEERING LABORATORIES: Santa Clara, California
R&D in mechanical & electronic product areas
ENGINEERED SYSTEMS DIVISION: Santa Clara, California
Systems planning, machinery development & special manufacturing; freeze-dry, grocery warehousing, and forest products systems
ENVIRONMENTAL EQUIPMENT DIVISION: Chicago, Illinois
Chicago Pump and Link-Belt: Water and wastewater treatment equipment; building service pumps
Environmental Engineering Laboratories: Santa Clara, California
R&D in environmental equipment
FLORIDA DIVISION: Lakeland, Florida
Fruit & vegetable-packing house equipment; citrus processing machinery; prestressed concrete casting forms, frost protection machines
GUNDERSON INC.Ⓟ: Portland, Oregon
Railroad freight cars; barges, marine vessels
JOHN BEAN DIVISION: Lansing, Michigan
Agricultural sprayers, dusters, harvesters, irrigation systems, automotive & airline service equipment; fire fighting equipment; high-pressure industrial pumps
Side-Winder: Tillthers & rotary cutters
Turner/Powell: Automotive service accessories
LINK-BELT BEARING DIVISION: Indianapolis, Indiana
Self-aligning ball and spherical roller bearings, sleeve bearing units
LINK-BELT CHAIN DIVISION: Indianapolis, Indiana
Drive and conveyor chains, automotive timing chain
LINK-BELT ENCLOSED DRIVE DIVISION: Philadelphia, Pennsylvania
Speed reducers, variable speed drives, valve actuators
LINK-BELT MATERIAL HANDLING EQUIPMENT DIVISION: Chicago, Illinois
Conveyors, elevators, vibrating screens, water screens, haulage machines
LINK-BELT MATERIAL HANDLING SYSTEMS DIVISION: Colmar, Pennsylvania
Engineered bulk material handling and processing systems, unit handling systems; dryers and coolers; car dumpers
LINK-BELT SPEEDER DIVISION: Cedar Rapids, Iowa
Power cranes, draglines, clamshells, hoes and shovels, hydraulic cranes and excavators; diesel pile hammers
PACKAGING MACHINERY DIVISION: Horsham, Pennsylvania
Packaging & paper box making machinery
Hudson-Sharp: Paper & film converting equipment; packaging machinery; flexographic printing presses
PEERLESS PUMP DIVISION: Los Angeles, California
Agricultural and industrial pumps; water systems
Coffin: Marine and industrial turbo pumps
Mechanical and Smith: Industrial castings
PETROLEUM EQUIPMENT DIVISIONS: Houston, Texas
Chikasan: Swivel & ball joints; liquid loading systems
Oil Center Tool: Wellheads; valves; underwater completion units
Olline: High-volume, submersible drive, vertical, centrifugal pumps
Weco: Unions; valves; swivel joints
RIVERSIDE DIVISION: Riverside, California
Fruit & vegetable packing house equipment; egg handling systems, materials handling & transport equipment, nailing machines
STEARNS ELECTRIC CORPORATIONⓄ: Milwaukee, Wisconsin
Magnetic clutches and brakes, solenoid controls
SYNTRON DIVISION: Homer City, Pennsylvania
Vibratory materials handling equipment, parts handling and power screw-driver equipment, shaft seals, power conversion equipment & components
INTERNATIONAL OPERATIONS:
FMC Machinery International Division: San Jose, California
British Cardboard Box Machine Company Ltd.Ⓞ: St. Albans, England
Packaging & paper box making machinery
FMC Argentina, S.A.Ⓞ: Cordoba, Argentina
Food processing, agricultural & petroleum equipment
FMC (Australia) Ltd.Ⓞ: Clayton, Australia
Food processing, agricultural, packaging, petroleum, waste treatment equipment
FMC Industrial e Comercio Limitada Ⓞ: Sao Paulo, Brazil
Citrus processing, agricultural, and automotive service equipment
FMC/Link-Belt Africa, Ltd.Ⓞ: Springs, Transvaal, Republic of South Africa
Food, agricultural, packaging equipment, cranes, vibratory equipment, materials handling, processing equipment
Food Machinery Espanola, S.A.Ⓞ: Valencia, Spain
Fruit & vegetable packing house equipment
FMC Maquinaria, S.A.Ⓞ: Mexico, D.F.
Food canning, processing and packaging machinery
FMC Packaging Machinery, N.V.Ⓞ: Aalst, Belgium
Packaging and setup box making machinery, printing presses
International Machinery Corporation, S.A.Ⓞ: Nivelles-Waas, Belgium
Food processing, packaging & agricultural equipment
Link-Belt Limited Ⓞ: Scarborough, Ontario, Canada
Materials handling and power transmission machinery, waste treatment equipment
Link-Belt Mexicana, S.A. de C.V.Ⓞ: Santa Cruz, Mexico
Material handling & power transmission products

MACHINERY GROUP (continued)

LinkBelt-Piratininga Transportadores Industriais Ltda.Ⓞ: Sao Paulo, Brazil
Materials handling & processing machinery
Link-Belt S.p.AⓄ: Milan, Italy
Power shovels, cranes, hoes; hydraulic excavators; diesel pile hammers
Link-Belt Speeder (Canada) Ltd.Ⓞ: Woodstock, Ontario, Canada
Power shovels, cranes, hoes; hydraulic excavators; diesel pile hammers
Link-Belt Speeder Mexicana, S.A. de C.V.Ⓞ: Mexico, D.F.
Power shovels, cranes, hoes; hydraulic excavators; diesel pile hammers
Lucost, S.A.Ⓞ: Sens (Yonne), France
Petroleum specialty equipment
Malco Industries Limited Ⓞ: Marrickville, Australia
Materials handling, processing and power transmission equipment
Manufacturas Hidromecanicas, S.A.Ⓞ: Maracaibo, Venezuela
Agricultural and industrial pumps
Peerless-Iran CorporationⓄ: Teheran, Iran
Pumps & irrigation systems
Peerless-Tisa, S.A. Ⓞ: Monterrey, Mexico
Agricultural pumps, irrigation systems, petroleum equipment
Symron (Canada) LimitedⓄ: Stoney Creek, Ontario, Canada
Vibratory equipment; power conversion equipment & components
Varley-FMC, Ltd.Ⓞ: Brentford, Middlesex, England
Pumps, food processing, waste treatment equipment
Vibrazioni Industriali S.p.A.Ⓞ: Genoa, Italy
Vibratory equipment

CHEMICAL GROUP

CHEMICAL RESEARCH & DEVELOPMENT CENTER: Princeton, New Jersey
R&D in organic & inorganic chemicals
INORGANIC CHEMICALS DIVISION: New York, New York
Alkalis, barium chemicals, dry bleach chemicals, chlorine, peroxygen chemicals, phosphates, solvents, sodium sulfate, strontium chemicals
NIAGARA CHEMICAL DIVISION: Middleport, New York
Agricultural insecticides, fungicides, weed killers; industrial sulphurs; basic materials for pesticide formulators; vegetable seeds
ORGANIC CHEMICALS DIVISION: New York, New York
Organic intermediates; plasticizers, diallyl phthalate resin materials; organic phosphorus chemicals, glycerine, acetic acid
PETRO-TEX CHEMICAL CORPORATIONⓄ: Houston, Texas
Butadiene; butylenes, alkylate, maleic anhydride; fumaric acid; neoprene, butyl rubber
INTERNATIONAL OPERATIONS:
FMC Chemical & Viscose International Division: New York, New York
Sales & licensing of products & processes of FMC Chemical and Fiber & Film Groups
Chlor-Chem Ltd.Ⓞ: Cambridge, Cambridgeshire, England
Cyanuric acid, dichloroisocyanuric acid & salts, trichloroisocyanuric acid
Electro Química Mexicana, S.A.Ⓞ: Mexico, D.F.
Hydrogen peroxide
FMC Chemicals Ltd.Ⓞ: Squamish, British Columbia, Canada
Chlorine; caustic soda; hydrochloric acid
Foret, S.A.Ⓞ: Barcelona, Spain
Industrial & agricultural chemicals
Niagara Chemical Division: Burlington, Ontario, Canada
Agricultural chemicals
Tokai Denka Kogyo, K.K.Ⓞ: Tokyo, Japan
Industrial chemicals

FIBER & FILM GROUP

AMERICAN VISCOSE DIVISION: Philadelphia, Pennsylvania
Cellulosic & synthetic fibers, yarns, staple, tire cord; cellophane & plastic packaging films; rayon cord & polypropylene strappings and equipment, palletizing shrink film and heat tunnel equipment, microcrystalline cellulose
KETCHIKAN PULP COMPANYⓄ: Portland, Oregon
Chemical dissolving wood pulp
INTERNATIONAL OPERATIONS:
Plasticos Extruidos, S.A.Ⓞ: Mexicali, Mexico
Polypropylene strappings
Viscosa de Chihuahua, S.A.Ⓞ: Chihuahua, Mexico
Rayon staple fiber

[illegible]

DEFENSE TECHNOLOGY LABORATORIES: Santa Clara, California
Weapons systems, munitions
NORTHERN ORDNANCE DIVISION: Minneapolis, Minnesota
Naval gun mounts, shipboard missile launching systems
ORDNANCE DIVISION: San Jose, California
Engineering & production of military vehicles, missile & aerospace ground support equipment; ocean engineering

LEGEND
Ⓟ 50% owned by FMC
Ⓞ Subsidiary of FMC
Ⓐ Affiliated company of FMC
Geographical locations indicate headquarters of each operation; locations of branch plants are not listed

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FOREMOST-MC KESSON COMPANY

Financial Profile

Market Value:	(434)	$ 270,986,000
Revenues:	(77)	$1,691,609,000
Assets:	(411)	$ 645,845,000
Net Profit:	(288)	$ 29,203,000

Chief Executive: R.J. Drews
Total Remuneration: $200,000
Value of Shares Owned/Controlled By: $1,098,000

Physical Profile

No. of employees: 18,000

Earnings by Division:
- Food Products 33%
- Drugs and Health Care 30%
- Liquor and Wines 21%
- Chemical Distribution..... 8%
- Land Development..... 8%

Divisions: Foremost Foods Co.
- Dairy Division: Fresh milk, ice cream and other dairy products.
- Food Products Division: Dried manufactured milk products, grocery shelf items, potato products, whey-based products.
- Water Division: Sparkletts, Alhambra, Crystal, Eagle Spring (processed water and water treatment).
- Foremost International

Liquor and wine
- McKesson Liquor Co,
  - Wholesale Division
  - Import Division
  - "21" Brands
  - Mohawk Liqeur Corp.
  - Ezra Brooks Division

Interconnecting Directorates

California Federal Savings and Loan Association; Pacific Lighting Corp. (2); Pacific Gas and Electric Co.; Western Bancorporation; Broadway-Hale Stores, Inc.; Bank of America N.T. & S.A.; Santa Fe Industries; Glore Forgan, William R. Staats Inc., N.Y.; Curtis Scientific Co.; White & Case (law); Bankers Trust Corp.; International Paper Co.; Macfarlane, Schaefer & Haun (law), among others.

GENERAL FOODS CORPORATION

250 North Street, White Plains, New York 10602

Financial Profile

Market Value:	(40)	$2,175,863,000
Revenues:	(55)	$2,045,355,000
Assets:	(199)	$1,360,996,000
Net Profit:	(59)	$ 99,308,000

Chief Executive: C.W. Cook
Total Remuneration: $266,000
Value of Shares Owned/Controlled By: $926,000

71,000 stockholders

Sales Profile: Overseas 13%
Canada..... 7%
Coffee.....28%
Other grocery.....39%
Food service
Institutional and
other.....13%

Physical Profile

No. of employees: 44,000

Divisions and Products - see following two pages

Interconnecting Directorates

Allied Chemical Corp.; General Motors Corp.; Gulf Oil Co.; Whirlpool Corp. (3); Houston Post Co.; Mutual of New York (4); International Paper Co.; First National City Bank (3); Dun and Bradstreet; Chemical New York Corp.; Connecticut General Insuran Corp.; First National City Corp. (2); Chase Manhattan Corp. (3); Allegheny Ludlum Industries, Inc.; Corpus Christi Bank & Trust; A.O. Smith Corp.; Schlumberger Ltd.; Corporation for Public Broadcasting; KPRC Radio Co.; Metropolitan Life Insurance Co.; American Express Co.; Caterpillar Tractor Co.; Dow Jones Inc.; Eli Lilly & Co. (2), I B M Corp. (2); Royal Dutch Petroleum Co.; U.S. Steel Corp.; Atlantic Mutual Insurance Company; Consolidate Edison Co. of New York Inc.; Fidelity Union Bancorporation; Emhart Corp.; Mobil Oil Corp. (2), among others.

General Foods
Divisions & Products

BIRDS EYE DIVISION
Alexander N. Brainard
Division President & GF Vice President

Products: Awake, Orange Plus, Concentrated Fruit Juices, Birds Eye Vegetables, Recipe-Prepared Vegetables, Deluxe Vegetables, International Vegetables, Quick Thaw Fruits, Onion Rings, Cool Whip Non-Dairy Whipped Topping, Cool'n Creamy Frozen Puddings.

Locations: Searcy, Ark.; Florence Villa, Fla.; Nampa, Idaho; Lafayette, Ind.; Waseca, Minn.; Hillsboro, Woodburn, Ore.; Walla Walla, Wash. + BIRDS EYE, INC., Avon, Fulton, N.Y. + CALIFORNIA VEGETABLE CONCENTRATES, Modesto, Saticoy, Calif. + BIRDS EYE DE MEXICO, S.A. de C.V., Celaya, Mexico.

JELL-O DIVISION
Raymond B. Rudy, Jr.
Division President & GF Vice President

Products: Jell-O Brand Desserts—Gelatin, Pudding & Pie Filling, Instant Pudding, Golden Egg Custard Mix, Whip'n Chill, Tapioca Puddings, Jell-O 1•2•3, Cheesecake, Pie Mixes; Minute Tapioca; D-Zerta Low Calorie Desserts & Topping Mix; Dream Whip Whipped Topping Mix; Minute Rice & Deluxe Rice Mixes; Calumet Baking Powder; Baker's Chocolate & Coconut; Certo & Sure-Jell Pectins.

Locations: Hollywood, Calif.; Dover, Del.; Lafayette, Ind.; Chicago, Ill.; Woburn, Mass. + FRANKLIN BAKER COMPANY OF THE PHILIPPINES, Davao, San Pablo, Republic of the Philippines.

KOOL-AID DIVISION
William C. Wahl
Division President & GF Vice President

Products: Kool-Aid soft drink mixes; Twist Imitation Ade Mixes; Good Seasons Salad Dressing Mixes; Open Pit Barbecue Sauces; Shake'n Bake Seasoned Coating Mixes; Kool Pops pop bars; Toast'em Pop-Ups and Toast'em Danka Toaster Danish; Swans Down Cake Flour & Mixes; LaFrance Whitener-Brightener.

Locations: Chicago, Ill.; Evansville, Ind.; Pendleton, Ore.

MAXWELL HOUSE DIVISION
James W. Andrews
Division President & GF Vice President

Products: Maxwell House, Yuban, Sanka Brand 97% Caffein Free Coffees; Instant Maxwell House, Instant Yuban, Instant Sanka Brand 97% Caffein Free Coffees; Maxim Freeze-Dried Coffee; Freeze-Dried Sanka; Maxwell House Electra-Perk.

Locations: San Leandro, Calif.; Jacksonville, Fla.; Hoboken, N.J.; Houston, Tex.

POST DIVISION
Ralph L. Cobb
Division President & GF Vice President

Products: Post Cereals—Alpha-Bits, Post Toasties, Grape-Nuts, 40% Bran Flakes, Grape-Nuts Flakes, Raisin Bran, Cinnamon Raisin Bran, Super Sugar Crisp, Honeycomb, Fortified Oat Flakes, Frosted Rice Krinkles, Crispy Critters, Pebbles, Post-Tens, Treat-Pak; Instant Postum; Start and Tang Instant Breakfast Drinks; Log Cabin Syrups; Pet Foods—Gaines Meal, Biscuits, Bits, Gravy Train, Gaines•burgers, Prime, Prime Variety, Top Choice.

Supplying: Folding cartons.

Locations: Kankakee, Ill.; Topeka, Kan.; Battle Creek, Mich.; Saratoga Springs, N.Y.

Food Service Units

INSTITUTIONAL FOOD SERVICE DIVISION
Joseph F. Abely
Division President & GF Vice President

Supplying: Institutional-size coffees, desserts, frozen foods, and other products for food service customers—restaurants, hotels, schools, hospitals. Individual-serving beverages and products for vending machines, as well as Kernel-Fresh Nuts and Popcorn products.

Location: Suffolk, Va.

BURGER CHEF SYSTEMS, INC.
Philip A. Korn
President & GF Vice President

Supplying: Quality food and quick service for people on the move. More than 1,100 Burger Chef family restaurants are located in most of the 50 States.

Headquarters: Indianapolis, Ind.

GENERAL FOODS, LIMITED (CANADA)

Robert S. Hurlbut
President & GF Vice President

Products: Maxwell House, Yuban, Sanka Regular & Instant Coffees; Maxim Freeze-Dried Coffee; Freeze-Dried Sanka; Jell-O Desserts; Minit Tapioca; Post Cereals; Baker's Chocolate & Coconut; Kool-Aid; Minute Rice; Cool Whip; Tang; Start; Awake; Sun-Up; Minute Breakfast; Dream Whip; Shake'n Bake; Good Seasons Dressings; Certo; Hostess Snack Foods; Gaines Pet Foods.

Headquarters: Toronto, Ont., Canada.
Locations: Cobourg, Ont.; La Salle, Que., Canada
HOSTESS FOOD PRODUCTS LIMITED, Preston, Ont., Kentville, N.S. + WHITE SPOT LIMITED, Vancouver, B.C. + CANTERBURY GRENADIER LIMITED, Toronto, Ont. + BURGER CHEF SYSTEMS (Canada) LIMITED, Toronto, Ont., Canada.

GENERAL FOODS INTERNATIONAL

George Bremser, Jr.
President & GF Group Vice President

GENERAL FOODS EUROPE, Brussels, Belgium

James H. Whitcomb
General Manager & GF Vice President

H. W. Pykala, Director, External Development
GENERAL FOODS LIMITED, Banbury, England
W. K. T. Drake, Managing Director
ALFRED BIRD & SONS (IRELAND) LIMITED, Dublin, Ireland
T. J. Harris, Managing Director
GENERAL FOODS G.m.b.H., Elmshorn/Holstein, Germany
S. T. Hinkes, General Manager
GENERAL FOODS SCANDINAVIA, Stockholm, Sweden
J. P. McManus, Managing Director
COMPANIA GENERAL DE SOLUBLES, S.A., Madrid, Spain
R. H. Coffin, Jr., General Manager
GENERAL FOODS BENELUX, Brussels, Belgium
C. S. B. Langford, General Manager
RIJSTPELLERIJEN N. & C. BOOST N.V., Merksem, Belgium
A. G. Boost, Managing Director
GENERAL FOODS FRANCE S.A., Rueil-Malmaison, France
Pierre Lemonnier, President
Vice President, General Food International
ELAH S.p.A., Genova-Pegli, Italy
W. Kistiakovsky, General Manager—GF Italy
Guido de Luca, Managing Director—Elah

GENERAL FOODS LATIN AMERICA/PACIFIC

David K. Evans
General Manager & GF Vice President

GENERAL FOODS DE MEXICO, S.A., Mexico City, Mexico
W. E. Brown, General Manager
LA INDIA, C.A., Caracas, Venezuela
E. H. Wedepohl, General Manager
KIBON S.A., Sao Paulo, Brazil
G. D. Westrop, General Manager
COTTEE'S GENERAL FOODS LIMITED, Sydney, Australia
J. S. Winkles, Region Director
GENERAL FOODS, LTD., Tokyo, Japan
E. J. Fuhrman, General Manager
GENERAL FOODS, INC., San Juan, Puerto Rico
D. J. Hughes, General Manager

EXPORT & MILITARY OPERATIONS

J.R. Torrens, *Director*

DISTRIBUTION—SALES SERVICES DIVISION

Robert A. Stringer
General Manager & GF Vice President

Locations: Los Angeles, San Francisco, Calif.; Denver, Col.; Newark, Del.; Washington, D.C.; Jacksonville, Fla.; Atlanta, Ga.; Chicago, Quincy, Ill.; Indianapolis, Ind; Boston, Mass.; Detroit, Mich.; Minneapolis, Minn.; Kansas City, St. Louis, Mo.; Omaha, Neb.; Clifton, N. J.; Syracuse, N.Y.; Charlotte, N.C.; Cincinnati, Youngstown, Ohio; Portland, Ore.; Memphis, Tenn.; Dallas, Tex.

Non-Food Units

VIVIANE WOODARD CORPORATION

J.I. Levin, *President & GF Vice President*

Supplying: A prestige line of high fashion cosmetics and personal care products to consumers, in their homes and by appointment only, through beauty consultants.

Headquarters: Panorama City, Calif.

W. ATLEE BURPEE COMPANY

William D. MacDowell, *President*

Supplying: Quality products for home gardens and lawns —flower and vegetable seeds; flower bulbs; nursery stock; house plants; and gardening aids.

Headquarters: Philadelphia, Pa.
Locations: Riverside, Lompoc, Santa Paula, Calif.; Sanford, Fla.; Clinton, Iowa; Doylestown, Pa.

KOHNER BROS., INC.

Oran G. Kirkpatrick, *President*

Supplying: Toys, games, and puzzles for infants and preschool children which educate as they entertain.

Location: East Paterson, N. J.

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GETTY OIL COMPANY

3810 Wilshire Boulevard, Los Angeles, California 90010

Financial Profile

Market Value:	(71)	$1,313,622,000
Revenues:	(127)	$1,221,170,000
Assets:	(124)	$1,946,303,000
Net Profit:	(54)	$ 111,146,000

Chief Executive: J. Paul Getty
Total Remuneration: $208,000
Value of Shares Owned/Controlled By: $853,681,000

Stockholders: 7,289 1,645,000 average number of shares outstanding

Physical Profile

No. of employees: 13,000

Subsidiaries - see following page

Agricultural holdings - see following page "Real Estate."

Interconnecting Directorates

Bank of America, N.T. & S.A.
Eastman Dillon, Union Securities & Co.
Hecht, Hadfield, Hays, Landsman & Head
Security Pacific National Bank
Pacific Mutual Life Insurance Co.
Carnation Co.
Kuhn, Loeb & Co.
Great Atlantic and Pacific Tea Co.
Lehman Bros.
University of Southern California (chancellor)
Litton Industries, Inc.
Southern California Edison Co.
among others.

Getty Oil Company Wholly Owned Subsidiaries

Associated Oil Company (California)
Club Pierre Marques, S.A. (Mexico)
Distribuzione Olii Minerali S.p.A. (Italy)
Getty Iran Ltd. (Delaware)
Gettymar Corporation (Liberia)
Getty Minerals Company, Limited (Canada)
Getty Mines, Limited (Canada)
Getty Mining Pacific, Limited (Canada)
Getty Mining Northwest, Limited (Canada)
Getty Oil Arctic, Limited (Canada)
Getty Oil (Canadian Operations), Ltd. (Canada)
Getty Oil Company, Ltd. (Alberta)
Getty Oil (Eagle Basin), Ltd. (Alberta)
Getty Oil International (Argentina), Inc. (Liberia)

Getty Oil International (Indonesia), Inc. (Liberia)
Getty Oil International (Latin America), Inc. (Liberia)
Getty Oil Maritime Limited (Canada)
Getty Oil Northwest Territories, Ltd. (Canada)
Getty Oil (Philippines) Inc. (Philippines)
Getty Petroleum Company (Liberia)
Getty Pipe Company (Pennsylvania)
Getty Pipe Line Company (Texas)
Getty Tankers, Ltd. (Liberia)
Hemisphere Transportation Corporation (Liberia)
Huiles Veedol France S.A. (France)
Liberian Operations, Inc. (Liberia)
Liberian Operations Limited (England)
Lubrificanti Veedol S.p.A. (Italy)
Minnehoma Land and Farming Company (California)
Pacific Western Oil Corporation (Delaware)
Seaside Oil Corporation (Delaware)
S.P. Oil Company (United Kingdom)
Sutton Place Property Company, Limited (England)
Transoceanic Shipping Corporation (Liberia)
Veedol Espanola S.A. (Spain)
Veedol G.m.b.H. (Germany)
Veedol Oil Company (Canada) Ltd. (Canada)
Veedol Petroleum International A.G. (Switzerland)

Getty Oil Company Consolidated Companies

Mission Corporation (Nevada)
  Skelly Oil Company (Delaware)
Nuclear Fuel Services, Inc. (Maryland)

Getty Oil Company Nonconsolidated Companies

Mitsubishi Oil Company (Japan) 48.7%
Mingas, Inc. (California) 71.19%

Real Estate

During 1970 Getty Oil continued efforts to realize the long-t profit opportunities from increased utilization of its 90 acres of California fee land, concentrated primarily in Los A les, Ventura, Orange, Santa Barbara, Kern and Fresno cour The real estate holdings include 10,600 acres of urban and urban property within 60 miles of Los Angeles and 40,000 in farming areas in the eastern and western sections of the so ern San Joaquin Valley in Kern County. The agricultura acreage in California was acquired at an average cost of $90 acre, beginning in the early 1900's, in conjunction with p leum exploration and production operations.

On the west side of the San Joaquin Valley 12,300 acres, u lease to four separate tenant farmers, were planted in co sugar beets and seed alfalfa in 1970. Test plantings of olive pistachio nut trees, comprising a total of 210 acres, conti to undergo evaluation in a program studying the practica of orchards in the long-term development of diversified far

The east side lands, which are located northeast of Baker are particularly suited for orchard operations. The com owns 1,500 acres of land planted with citrus and almond p which are operated under farm management agreement leases. An additional 911 acres are operated by the Minne Land & Farming Company, a Getty Oil subsidiary.

Studies continued during 1970 on preparation of a lar plan for the development of the company's 10,300-acre Ranch, which is situated 40 miles northwest of central Los les near Simi Valley, Ventura County.

THE GREAT ATLANTIC AND PACIFIC TEA COMPANY, INC.

Financial Profile

Market Value:	(185)	$680,926,000
Revenues:	(12)	$ 5,753,692,000
Assets:	(290)	$ 957,073,000
Net Profit:	(151)	$ 53,302,000

Chief Executive: W.J. Kane
Total Remuneration: $126,008
No. of Shares Owned/Controlled By: 1,139

Stockholders: 47,900 24,875,224 average number of shares outstanding

Physical Profile

No. of employees: 125,000 Stores: 4,427

Subsidiaries:
- The Great Atlantic & Pacific Co. of Vermont
- The Great Atlantic & Pacific Tea Co., Ltd.
  - The Great Atlantic & Pacific Co. of Canada, Ltd.
  - A & P Properties Ltd.
  - Metcalfe Foods (Canada) Ltd.
- Nakat Packing Corp.
- American Coffee Corp.
- TAP, Inc.
- Compass Foods, Inc.
- Gress Stores Co., Ltd.
- Super Market Service Corp.
- Vehicle Leasing, Inc.
- Kwik Save, Inc.

Interconnecting directorates

Kuhn, Loeb & Co.; Getty Oil Co.; New York Life Insurance Co. J.P. Morgan & Co., Inc.; Pan American; Federal Price Commission, among others.

GREEN GIANT COMPANY

Le Sueur, Minnesota 56058

Financial Profile

Market Value: $66,222,000
Revenues: $197,491,000
Assets: $145,178,000
Net Profit: $ 4,279,000

Chief Executive:
Total Remuneration:
No. of Shares Owned/Controlled By:

Physical Profile

No. of employees: 3500

Subsidiaries and Divisions:
- Bama Meats, Inc.
- Container operations
- Copeland Sausage Co.
- Grocery products
- Green Giant of Canada, Ltd.
- Green Giant Home & Garden Centers Inc
- International operations
- Jolly Green Giant Restaurants, Inc.
- Schweigert Meat Co.

Brand Names:
- Green Giant
- LeSeuer
- Niblets
- Mexicorn
- Dawn Fresh

21 processing plants in the United States
4 can manufacturing facilities satisfies 87% of the company's requirements
Owns or leases 35% of the land it obtains crops from with company employees doing the farming work
- 285,000 acres under cultivation in 19 states and two Canadian provinces

Ten percent of sales revenues go to research which is twice the industry average.

Interconnecting Directorates

McTague, Clark, Holland, Whiteside, Coughlin, Ouellete & Mailloux; Dayton Hudson Corp.; Paine, Webber, Jackson & Curtis; Community Investment Enterprises Inc. (2); The Hillman Co. (and subsidiaries); First National Bank of St. Paul (2); First Bank System, Rex Chainbelt Inc.; Super Value Stores Inc. (Hopkins, Minn.), Burlington Northern Inc.: Minnesota Mutual of Wausau; First National Bank of Minneapolis; Global Marine Inc.; Western Kentucky Gas Co.; Pittsburgh Coke and Chemical Co.: Pittsburgh National Bank; Kollmorgen Corp.; Mars Industries; Medtronic Inc.; Dealers Manufacturing Co.; Cambridge Corp.; Kroy Industries; Toro Manufacturing Corp.; First Trust Co.: Central Research Laboratories Inc.: Allied Bank International; Investors Diversified Service Inc., among others.

H. J. HEINZ COMPANY

P.O. Box 57, Pittsbu[illegible] [illegible]nsylvania 15230

Financial Profile

Market Value:	(276)	$499,879,000
Revenues:	(194)	$881,171,000
Assets:	(401)	$669,542,000
Net Profit:	(262)	$ 32,571,000

Chief Executive: R.B. Gookin
Total Remuneration: $262,000
Value of Shares Owned/Controlled By: $486,000

Stockholders: 11,407 13,252,859 average common stock shares outstanding

Physical Profile

No. of employees: 34,000

World Locations

World Headquarters

[illegible]. O. Box 57
[illegible]ittsburgh, Pa. 15230

[illegible]orth America

[illegible]einz U.S.A. Division
[illegible]ittsburgh, Pa.
[illegible]orman E. Daniels, President

[illegible]actories:
Salem, N. J.
Chambersburg, Pa.
Pittsburgh, Pa.
Winchester, Va.
Fremont, Ohio
Bowling Green, Ohio
Holland, Mich.
Lakeview, Mich.
Muscatine, Iowa
Tracy, Calif.
Stockton, Calif.

Star-Kist Foods, Inc.
Terminal Island, Calif.

Wholly-owned subsidiary; acquired in 1963.
Joseph J. Bogdanovich, President

Factories
Terminal Island, Calif.
Ilo, Peru
Coishco, Peru
Pago Pago, American Samoa
Mayaguez, Puerto Rico

Cold Storage Stations:
Senegal
Ghana
Liberia
Republic of the Congo
Paita, Peru

Ore-Ida Foods, Inc.
Boise, Idaho

Wholly-owned subsidiary; acquired in 1965.
Robert K. Pedersen, President

Factories:
Ontario, Ore.
Burley, Ida.
Greenville, Mich.

H. J. Heinz Company of Canada Ltd.
Toronto, Ontario
Wholly-owned subsidiary; established in 1909.
Albert Forsyth, President

Factory:
Leamington, Ont.

Latin America and Pacific

H. J. Heinz Company of Australia Ltd.
Dandenong, Victoria

Wholly-owned subsidiary; established in 1935.
Fred V. Kellow, Managing Director

Factory:
Dandenong, Victoria

Alimentos Heinz C.A.
Valencia, Carabobo, Venezuela

100% Heinz owned; established in 1959.
John Johnson, President

Factory:
San Joaquín, Carabobo

Nichiro Heinz Company Ltd.
Tokyo, Japan

80% Heinz owned; established in 1961.
Ernest W. Barr, President

Factory:
Kuriham[illegible]

Heinz Alimentos S.A. de C.V.
Mexico City, Mexico

80% Heinz owned; acquired in 1963
Gerald K. Warner, President

Factories:
Salamanca, Guanajuato
Los Robles, Veracruz
Loma Bonita, Oaxaca
Los Mochis, Sinaloa

(continued on following page)

Interconnecting Directorates

Mellon National Bank and Trust Co. (4); Bank of America, New York; Bankers Trust New York Corp.; General Motors Corp.; PPG Industries; Aluminum Company of America; Armco Steel; Mine Safety Appliance Co.; Shenango Furnace Co., among others.

1969

Agriculture

Long-term agricultural programs continued to benefit the company in two ways: by increased independence from crop gluts and scarcities, and by leadership in research for better crop strains and more efficient harvesting methods.

For many years it has been Heinz policy to make contracts for major ingredients in advance of the growing season, and to do so with growers throughout the country. Geographical diversification in contracting has brought us close to our goal of having assured supplies even when some areas experience poor harvests. In fiscal 1970, despite unfavorable growing conditions in a number of areas, we achieved 100 percent of our required quantities of all contracted crops.

Mechanical harvesting, more efficient and economical than hand labor, is being used increasingly for Heinz crops. Our California tomato crop is 100 percent machine harvested. During calendar 1970 our cucumber acreage will be 40 percent machine harvested, a sharp rise over previous years. Within a very few years, complete mechanical harvesting of all our requirements in both crops is expected, making us less dependent on increasingly scarce and expensive hand labor.

Progress is being made in new planting methods as well as in harvesting. A dissolvable plastic tape with encapsulated seeds has been developed to permit precision planting in terms of seed spacing and depth. The uniformity of the resulting crops makes them more suitable for mechanical harvesting. The new taped seed method is being used extensively for our California cucumber crop and to a lesser extent for our acreage in the Midwest. The same system is being applied to tomato crops in both northern and southern growing areas.

Advances in bulk handling also have contributed to more efficient and economical agricultural operations. The bulk handling technique makes use of special vehicles that are able to transport large quantities of crops from field to factory, without requiring hand labor to pack the harvest into individual containers. The vehicles can also dump their loads directly into storage areas at the receiving plant without requiring labor for unloading. During fiscal 1970 the percentage of tomatoes received in bulk at our Ohio factories rose to 50 percent, while 18 percent of the California tomato crop was shipped and received in bulk. This economical handling method is also being used increasingly for cucumbers.

World Locations (continued)

Europe

H. J. Heinz Company Limited
Hayes, Middlesex, England

91.16% Heinz owned; established in 1905.
Anthony de la P. Beresford, Vice Chairman
Anthony J. F. O'Reilly, Managing Director

Factories:
Harlesden (London)
Kitt Green
Standish

W. Darlington and Sons (Holdings) Ltd.
Angmering, Sussex (acquired in 1969)
Robert G. Darlington, Managing Director

Pickerings Foods Ltd.
Hayes, Middlesex
George Popham, Managing Director

Factories:
Didcot, Berks
Halnaker, Chichester
Wellingborough, Northamptonshire
Shrewsbury, Shropshire
Coleraine, Northern Ireland

Heinz-Erin Ltd.
Dublin, Ireland
50% Heinz owned; established in 1967 to market products of Erin Foods, Ltd. in the United Kingdom.
Charles F. Lowe
Brendan G. Doyle
Managing Directors

H. J. Heinz A/S
Copenhagen, Denmark

Established in 1969 to market Heinz products in Denmark.
Dennis F. J. Shattock, Chairman

H. J. Heinz N.V.
Elst, Gelderland, The Netherlands

Wholly-owned subsidiary; acquired in 1958.
Arnold A. Reuvekamp, Managing Director

Factory:
Elst, Gelderland

H. J. Heinz Company (Belgium) S.A./N.V.
Brussels, Belgium
Arnold A. Reuvekamp, Managing Director

Industrias de Alimentacao Limitada
Lisbon, Portugal

70% owned by H. J. Heinz Company N.V., The Netherlands; acquired in 1965.
Jorge Giralt, General Manager

Factories:
Vila Franca de Xira
Benavente

Industria de Produtos Agricolas Desidratados, Ltda.
Vila Franca de Xira, Portugal

50% Heinz owned.
Jorge Giralt, General Manager

Factory:
Vila Franca de Xira.

Societa del Plasmon S.p.A.
Milan, Italy

Wholly-owned subsidiary; acquired in 1963.
Dr. Aldo Tartarelli, Managing Director

Factory:
Milan

Societa del Plasmon, Sud., S.p.A.
Latina, Italy
Dr. Aldo Tartarelli, Managing Director

Factory:
Latina

1970

Agriculture

Developments in agriculture underscored efforts of the North American group to become increasingly independent of commodity cycles through greater reliance on modern growing, harvesting, handling and storage techniques. Heinz U.S.A.'s mechanically-harvested cucumber acreage doubled compared with the previous year and should double again in the current fiscal year. Harvesting of the California tomato crop is already entirely mechanized, and mechanical harvesting is increasing rapidly in other areas of the country. During the coming year there should be a 100 percent increase in machine harvesting of tomato crops in the East and Midwest.

The factories at Fremont and Bowling Green, Ohio were completely converted to bulk handling of tomatoes, with receiving tanks, elevators, flumes and water flows all adapted to this method, which reduces labor costs and waste.

Heinz of Canada, which had access to the best tomato harvest in five years, successfully tested a new bulk handling system that will be able to handle approximately 60 percent of this year's tomato crop.

Agricultural research facilities were expanded during the year in both Ohio and California.

Heinz laboratories developed two new tomato varieties, one for use in California and one for use in the East, both suitable for mechanical harvesting. Good progress has been achieved also in development of disease-resistant tomato strains and dwarf cucumber hybrids.

J. G. BOSWELL COMPANY

P.O. Box 877, Corcoran, California

Financial Profile

Sales volumne is approximately $50,000,000 a year

Physical Profile

Land ownership:

Held in own name	32,364 acres
Boston Ranch	37,555 acres
Crockett-Gambody (controls)	28,503 acres
Tulare Lake Land Company (controls)	10,392 acres
	108,814 acres

Also owns 500 acres of grapes in Arizona (accounts for 1% of business)
Auscott Ltd. (Australian subsidiary)
10,000 acres of cotton producing land 250 miles northwest of Sydney (approximately one-seventh of the country's cotton acreage.
Received some $500,000 in 1968 from the Australian government in 1968 (as a bounty to stimulate production) to grow cotton. In 1970 the Company received $600,000

Cotton ranching, ginning, edible oil, cattle feed and produce

No. of employees: 1500

Operation Notes

ASCS Subsidy Payments ($21,442,104)

1966	J.G. Boswell	$2,807,633	Boston Ranch	$ 506,061
1967	J.G. Boswell	$4,091,818	Boston Ranch	$ 458,020
1968	J.G. Boswell	$3,010,042	Boston Ranch	$ 448,158
1969	J.G. Boswell	$4,370,657	Boston Ranch	$ 643,006
1970	J.G. Boswell	$4,429,484	Boston Ranch	$ 677,225
		$18,709,634		$2,732,470

Combine of 53 investors paid Boswell $1.3 million for a one-year lease (1971) of the firm's cotton allotments. They also paid Boswell to farm the leased land. Each participant is eligible to receive the 1971 maximum ASCS payment of $55,000. In the meantime the Company planted 25% more cotton in 1971 than previous years.

Boston Ranch Co. owns 22,381 acres which is "eligible" for federally subsidized water in the Westlands Water District. As of July 30, 1970 none of this acreage was contract to be sold as"excess land." The Company also receives water in other CVP ares: Kaweah Delta 6,630 acres and Lower Tule River 4,916 acres.

Interconnecting Directorates

Safeway Stores Inc. (2); Security Pacific National Bank, Caterpillar Tractor Co.; Bank of California, N.A.: Fibreboard Corp.; Southern Pacific Co.: Merrill Lynch, Pierce, Fenner & Smith; Cal Tech, among others.

KAISER INDUSTRIES CORPORATION

Kaiser Center, 300 Lakeside Drive, Oakland, California 94604

Financial Profile

Market Value:	(388)	$326,887,000
Revenues:		$313,241,000
Assets:	(457)	$569,708,000
Net Profit:	(346)	$ 23,275,000

Chief Executive: Edgar F. Kaiser
Total Remuneration: $381,000
Value of Shares Owned/Controlled By: $137,877,000

Physical Profile

No. of employees: 13,000

Multinational wholly and partially owned facilities and operations
Western Hemisphere Only - see following page

PRINCIPAL PRODUCTS

Alumina

Aluminum
Ingot/Billet
Flat and Coiled Sheet
Plate/Circles
Cans/Can Stock
Industrial and Packaging Foils
Bare and Laminated Foil
Semi-Rigid Foil Containers
Residential Siding
Rain Carrying Equipment
Sign Blanks/Nails/Louvered Screening
Agricultural and Commercial Roofing/Siding
Culvert and Drainpipe Products/Forgings/Extruded Shapes
Rod, Bar and Wire
Forging Stock/Screw Machine Stock
Electrical Conduit, Wire and Cable
Electrical Conductor Accessories
Street Light Standards/Bus Bar
Aluminum Conductor Contact Rail
Transmission Towers/Welding Wire
Mobile Home Panels/Skirting Kits
Soffit/Fascia
Ornamental Shutters/Shingles
Architectural and Industrial Panels

Agricultural Chemicals
Anhydrous Ammonia
Nitrogen Solutions (direct application and manufacturing)
Liquid and Solid Urea, Nitric Acid
Prilled Ammonium Nitrate, Superphosphate
Ammonium Nitrate, Ammonium Nitrate Liquor
Calcium Ammonium Nitrate, Mixed Fertilizers (solids, liquids, suspensions), Aqua Ammonia
Liquid Feed Products
Lawn and Garden Specialty Fertilizers
Blasting Agents

Bauxite

Coke

Dolomitic Rock Products
Architectural Sand and Stone
Glass Sands
Industrial Liming Grades
Fillers and Extenders

Industrial Chemicals
Special Aluminas (Tabular, Calcined, Hydrated and Active)
Caustic Soda/Chlorine
Anhydrous Hydrogen Fluoride
Fluorocarbons/Aluminum Fluoride/Synthetic Cryolite
Isocyanates/Polyamines/Potash

Iron Ore

Magnesium
Magnesium Extrusions and Anodes
Fabricated Magnesium Products
Melting Flux

Manufactured Building Systems

Nickel

Refractories
Basic Refractory Brick and Specialties
Periclase/Magnesite
Deadburned Magnesite/Fireclay
High Alumina and Fireclay Brick
Fireclay and High Alumina Specialties
Insulating Refractories
Super Refractories
Deadburned Dolomite
Magnesium Hydroxide

Specialty Building Panels
Laminated Porcelain/Enamel/Steel Panels
Ceramic Panels
Laminated Aluminum Panels
Chalkboard
Aggregate Panels
Cement Asbestos Panels

Strontium Products
Strontium Carbonate
Strontium Nitrate
Sodium Sulphate

Interconnecting Directorates

Bankamerica Corp. (2); Time, Inc.; Broadway-Hale Stores Inc.; Di Giorgio Corp.; Bank of America N.T. & S.A.; Standard Oil of California; Wilmer, Cutler & Pickering; First Boston Corp. (2); Thelen, Marrin, Johnson & Bridges; Consolidated Foods Corp.; Massachusetts Institute of Technology (communications biophysics); The New York Times, among others.

United States

Alabama
aluminum fabricating at Bay Minette.

Arizona
real estate and land development at Kaiser Aetna's McCormick Ranch, Phoenix industrial park.

California
aluminum fabricating at Anaheim, Benicia, Los Angeles, Oxnard, Permanente, Sacramento, San Leandro, South San Francisco, Union City; *chemicals* at San Leandro; *refractories* at Moss Landing, Natividad; *manufactured buildings* at Newark; *real estate and land development* at Westward Properties' The City; at Kaiser Aetna's Kearny Industrial Park, Rancho California, So. Center Industrial Park, Warner Ranch, Rancho Ventura, Aliso Ranch, San Tomas Industrial Park, Anderson Ranch, Butte Farms, Rancho San Luis.

Colorado
refractories at Denver.

Florida
aluminum fabricating at Jacksonville, Lantana; *chemicals* at Brooksville, Mulberry, Tampa.

Georgia
aluminum fabricating at Douglas; *chemicals* at Bainbridge, Savannah.

Hawaii
real estate and land development at Kaiser Aetna's Hawaii-Kai.

Illinois
aluminum fabricating at Dolton.

Indiana
raw materials at Gary; *aluminum fabricating* at Bedford, Elkhart, Wanatah.

Kentucky
aluminum fabricating at Louisville.

Louisiana
raw materials at Baton Rouge, Chalmette, Gramercy, Norco; *primary aluminum* at Chalmette; *chemicals* at Baton Rouge, Gramercy.

Maryland
aluminum fabricating at Halethorpe; *refractories* at Frostburg.

Mississippi
raw materials at Purvis.

Missouri
refractories at Mexico.

New Jersey
aluminum fabricating at Edison.

New York
aluminum fabricating at Schenectady.

North Carolina
chemicals at Wilmington.

Ohio
aluminum fabricating at Belpre, Newark, Toledo; *chemicals* at Cincinnati; *refractories* at Columbiana; *manufactured buildings* at Delaware.

Oklahoma
magnesium fabricating at Tulsa.

Oregon
aluminum fabricating at Salem; *real estate and land development* at Kaiser Aetna's Port Westward.

Pennsylvania
aluminum fabricating at Erie, Lancaster; *building panel fabrication* at Port Carbon.

Rhode Island
aluminum fabricating at Bristol, Portsmouth.

Tennessee
chemicals at Big Springs.

Texas
aluminum fabricating at Arlington, Houston, Sherman.

Utah
chemicals at Wendover.

Washington
raw materials at Spokane; *primary aluminum* at Spokane, Tacoma; *aluminum fabricating* at Spokane, Vancouver.

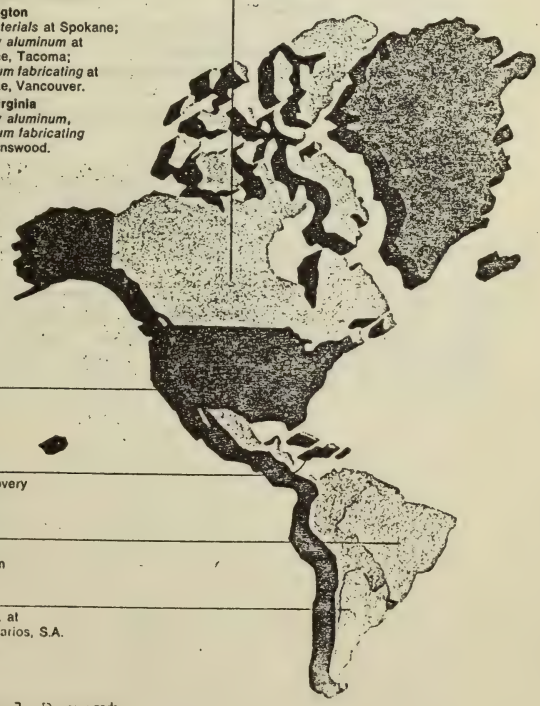
West Virginia
primary aluminum, aluminum fabricating at Ravenswood.

THE MULTINATIONAL WORLD OF KAISER ALUMINUM & CHEMICAL CORPORATION

Wholly and Partially Owned Facilities and Operations

(Western Hemisphere Only)

Canada
refractories from Kaiser Refractories Co., Division of Kaiser Aluminum & Chemical Canada Ltd. at Oakville, Ontario; *celestite* from Kaiser Celestite Mining Ltd.* at Pt. Edward, Nova Scotia; *strontium compounds* from Kaiser Strontium Products Ltd.* at Pt. Edward, Nova Scotia; *fabricated aluminum* from Kaiser Aluminum Co., Division of Kaiser Aluminum & Chemical. Canada Ltd. at Scarborough, Ontario; *iron ore* from Texada Mines Ltd. at Texada, British Columbia.



Jamaica
bauxite from Kaiser Bauxite Company at Discovery Bay; *alumina, bauxite* from Alumina Partners of Jamaica at Nain.

Brazil
fabricated aluminum from Kaiser Aluminio do Brasil S.A. at Lorena; *international trading* from Kaiser Trading in Sao Paulo.

Argentina
fabricated aluminum from Kaiser Aluminio S.A. at Buenos Aires; *refractories* from Kaiser Refractarios, S.A. at Buenos Aires; *international trading* from Kaiser Trading in Buenos Aires.

LITTON INDUSTRIES INC.

360 North Crescent Drive, Beverly Hills, California 90210

Financial Profile

Market Value:	(226)	$599,592,000
Revenues:	(45)	$ 2,404,327,000
Assets:	(125)	$ 1,934,012,000
Net Profit:	(101)	$ 68,751,000

Chief Executive: C.B. Thornton
Total Remuneration: $167,000
Value of Shares Owned/Controlled By: $22,616,000 (common stock)

Physical Profile

No. of employees: 118,000

MAJOR DIVISIONS
- Business Machines and Systems
- Retail and Revenue Systems
- Typewriters and Office Copiers
- Specialty Paper, Printing and Forms
- Business Furnishings and Fixtures
- Navigation and Control Systems
- Communications and Electronic Data Systems
- Marine Engineering and Production
- Material Handling
- Engineering and Construction
- Electronic Components
- Electric Motors, Power Drives and Controls
- Medical Products
- Educational and Professional Publishing
- Resource Exploration
- Food Products and Service
  - Atherton, Stouffer Food, Stouffer Food Systems and Stouffer Restaurant & Inn

Interconnecting Directorates

Pacific Mutual Life Insurance; Bankamerica Corp.; Bank of America N.T. & S.A.; Western Bancorporation; Security Pacific National Bank; Pacific Gas and Electric; Wells Fargo & Co.; United Aircraft Corp.; United Air Lines, Inc.; Consolidated Natural Gas System, Lehman Bros.; Getty Oil Co., among others.

LUCKY STORES, INC.

1701 Marina Boulevard, San Leandro, California 94577

Financial Profile

Market Value:	(301)	$ 445,772,000
Revenues:	(95)	$1,488,715,000
Assets:		$ 275,234,000
Net Profit:	(343)	$ 23,475,000

Chief Executive: G.A. Awes
Total Remuneration: $338,409
Value of Shares Owned/Controlled By: $1,962,000

Stockholders: 25,276 12,781,766 average shares common stock outstanding

Physical Profile

No. of employees: 26,000

428 retail stores
252 supermarkets
70 discount stores
28 membership department stores
32 drug stores
43 ladies apparel stores
3 sporting goods stores

Lucky, through subsidiaries is also involved in an automotive warehouse distributor, milk processing plant, meat distributor, and deli packaging plant.

Interconnecting Directorates

Chabot College; Diepenbrock, Wulff, Plant & Hannegan; Bank of America; Pacific Power and Light Co; Stanford & McDonough; Donahue, Gallagher, Thomas & Woods; Allied Properties, among others.

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THE NEWHALL LAND AND FARMING COMPANY

Financial Profile

Market Value: $58,139,000
Revenues: $31,127,000
Assets: $110,276,000
Net Profits: $ 2,850,000

Chief Executive: Thomas L. Lowe
Total Remuneration: $72,400
No. of Shares Owned/Controlled By: 34,632

Income distribution:
Agriculture and Cattle $21,957,000
Land Sales .....$ 1,713,000

Physical Profile

No. of employees: 500

Subsidiaries:
North American Dehydrating Corp.
Ranchers Supply Co.
Valencia Water Company
Valencia Recreation Enterprises, Inc.

White Investment Co., owned exclusively by the Newhall family, holds 1,532,000 shares (29%) of the Com stock.

Acreage - see following page

Operation Notes

ASCS Subsidy Payments - see following page

Interconnecting Directorates

Castle & Cooke Inc.; Fillmon-Piru Citrus Association; Ventura County Citrus Exchange; Sunkist Growers; Las Pasas Orchard; Western Bancorporation; Pacific Mutual Life Insurance Company; Pacific Telephone & Telegraph Co.; DiGiorgio Corp.; Bank of America N.T. & S.A.; Bankamerica Corp.; Broadway-Hale Stores Inc.(2) Southern Pacific Company; California Portland Cement Co.; Security Pacific National Bank; Concord TV Cable-5 (S.F.); White Investment Company; Brobeck, Phleger & Harrison; Henry Mayo Newhall Foundation, among others.

Name	Year of Acquisition	Acreage
Newhall.....	1883-1969	41,000
Suey.....	1883	37,800
New Columbia.....	1948-1964	28,500
Merced.....	1954	15,400
Adams and Maxwell...	1965-1967	8,500
Meridian.....	1912	5,500
Wilson.....	1959-1964	4,800
Burrel.....	1967	4,100
Cowell.....	1959-1965	2,300
Mendoza.....	1963	2,200
Wood.....	1965	800
Other.....	1960	150
		151,050

- 1970 SEC Report

ASCS SUBSIDY PAYMENTS:

1970	$400,347
1969	$258,555
1968	$234,432
1967	$181,684
1966	$ 74,418
	$1,149,436

Agriculture and Cattle

Of the lands owned by the Company approximately 50,000 acres are under irrigation and intensive farming, 85% of which are farmed in a diversified way by the Company. During 1970, approximately 30 different crops were harvested by the Company and/or its tenants on its six principal agricultural properties which are scattered throughout the Sacramento and San Joaquin Valleys. Certain lands owned by the Company are located in areas where the water supply is supplemented by federally financed reclamation districts. An ample water supply is expected to be available for current and future agricultural needs. Approximately 60% of the Company's farm crops is marketed through agricultural cooperatives.

Ranch land not now usable for agriculture is, in general, employed in the Company's cattle operation. In 1970, 172,000 additional acres were leased from nongovernment landowners for grazing. The total number of head that were grazed during that year approximated 40,000.

- 1970 SEC Report

NORTON SIMON INC.

277 Park Avenue, New York, New York 10017

Financial Profile

Market Value:	(253)	$ 539,459,000
Revenues:	(165)	$1,014,224,000
Assets:	(364)	$ 747,230,000
Net Profit:	(228)	$ 36,787,000

Chief Executive: D.J. Mahoney
Total Remuneration: $219,000
Value of Shares Owned/Controlled By: $23,000 (common stock)

Physical Profile

Sales by Product Group - see following page

No. of employees: 30,000

Operation Notes

3 canneries converted in 1970 from seasonal to year-round manufacturing
2 seasonal processing plants were closed

Company built a $3.5 million 80,000 square feet Research and Development Center in Fullerton, California

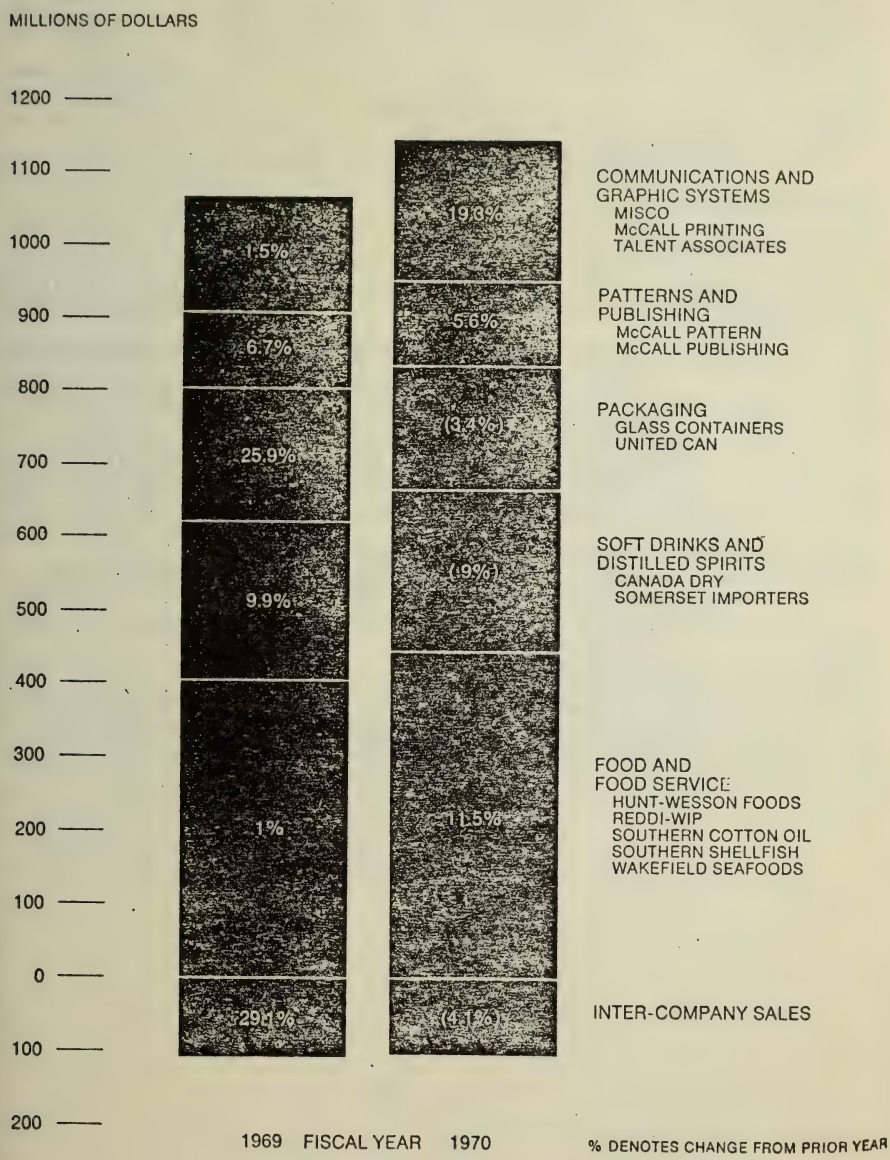
Company employs about 5000 people in the processing of their canned foods, vegetable oil and grocery products in some 25 major plants.

Interconnecting Directorates

Times Mirror Corp.; Bank of America, N.T. & S.A.; Pacific National Life Assurance Co.; Crocker National Corp.; Braniff International; Ling-Temco-Vought (2); Goldman, Sachs & Co.; Golden Leisure Inc.; First Bank System; Burlington Northern Inc.; General Telephone and Electronics Corp.; O'Melveny & Myers; Lerand Inc.; University of California at Los Angeles (business administration); Hallmark Cards Inc.; Ford Motor Co.; Samuel H. Kress Foundation, among others.

NORTON SIMON INC

SALES BY PRODUCT GROUP



OGDEN CORPORATION

161 East 42nd Street, New York, New York 10017

Financial Profile

Market Value:		$ 122,958,000
Revenues:	(141)	$1,136,227,000
Assets:	(492)	$ 531,724,000
Net Profit:		$ 13,164,000

Chief Executive: R. E. Ablon
Total Remuneration: $150,000
Value of Shares Owned/Controlled By: $913,000

Physical Profile

No. of employees: 44,000

Divisions: Metals, Transportation, Marine Construction, Development Recreation, and Foods
Foods
Flavor Pict Inc. - a Florida-based grower and marketer of fresh tomatoes.
Tillie Foods, Inc. - canners of fruit, tomatoes and other vegetables.
Meat packing in Paraguay
Hot dogs in Los Angeles' Dodger Stadium, Nedick's in New York, and Doggie Diners on the Pacific Coast.
Mass feeding sales through ABC Consolidated.

Ogden bought Western California Canners
Originally bought for approximately $7 million by American Transportation Enterprises in 1967 and later sold to Ogden at cost plus $1 million in expenses.

Interconnecting Directorates

Allen & Co. (investment bankers) (2); PepsiCo Inc.; Wertheim & Co. (investment bankers); Allied Supermarkets, Inc.; Holtzmann, Wise and Shepard (law); Linkletter Enterprises Inc.; Western Airlines Inc.; C F & I Steel Corp., among others.

PACIFIC GAS AND ELECTRIC COMPANY

245 Market Street, San Francisco, California 94106

Financial Profile

Market Value:	(42)	$2,115,103,000
Revenues:	(151)	$1,103,258,000
Assets:	(48)	$4,318,832,000
Net Profit:	(24)	$ 166,219,000

Chief Executive: S.L. Sibley
Total Remuneration: $150,000
Value of Shares Owned/Controlled By: $154,000

Sales (Agricultural Power) 3,737,285 KWH +20.6% from 1969
Revenues (Agricultural Power) $53,339,000 +12.5% from 1969

Physical Profile

No. of employees: 24,000

Operation Notes

"Food processing --- the State's largest manufacturing in dollar output --- further expanded to meet the growing domestic and worldwide demand for more convenience type food products. Highlighting this process was the completion of two new "super-canneries," which are the largest and most modern of their type in the world and able to process both fruit and vegetable crops on a virtually uninterrupted basis."

- from the 1970 Annual Report in recounting the accomlishments of PG & E the previous year.

Interconnecting Directorates

Bank of California, N.A. (2); Safeway Stores Inc., Shell Oil Co.; Ridder Publications; Pacific Telephone and Telegraph Co.; Crocker National Corp.; Del Monte Corp. (2); Pillsbury, Madison and Sutro (law); FMC Corp. (2); Wells Fargo & Co. (2); Georgia Pacific Corp.; Litton Industries Inc.; Levi Strauss Co.; Southern Pacific Co.; Western Bancorporation; Foremost McKesson Inc.; Del Monte Properties, Inc.; Amfac Inc., among others.

DISTRIBUTION OF STOCK OWNERSHIP
By Class of Investor, December 31, 1970

	Number of Stockholders	Number of Shares Owned
Women	96,914	17,284,151
Joint and other tenancies	65,235	9,878,662
Men	53,142	9,810,356
Trustees, guardians and other fiduciaries	23,410	3,836,115
Nominees	3,683	25,696,149
Corporations, partnerships and proprietorships	1,634	1,146,635
Charitable and fraternal organizations and foundations	1,501	654,688
Banks and trust companies, investment companies and security dealers	1,004	2,793,110
Religious institutions	544	123,442
Insurance companies	499	4,474,377
Educational institutions	227	91,199
Labor organizations	28	14,196
Total	247,821	75,803,080

- 1970 Annual Report

PACIFIC LIGHTING CORPORATION

P.O. Box 60043 - Terminal Annex, Los Angeles, California 90060

Financial Profile

Market Value:	(306)	$ 441,099,000
Revenues:	(258)	$ 675,342,000
Assets:	(243)	$1,159,035,000
Net Profit:	(218)	$ 38,658,000

Chief Executive: P.A. Miller
Total Remuneration: $112,000
Value of Shares Owned/Controlled By: $1,200,000

Physical Profile

No. of Employees: 9000

Utility Companies
Southern California Gas Company
Pacific Lighting Service Company

Non-Utility Companies
All-Year Weather, Inc.
Blackfield Hawaii Corporation
Central Plants, Inc.
Dual Fuel Systems, Inc.
Dunn Properties Corporation
W. D. Fowler & Sons Corporation
Fredricks Development Corporation

Hawaii real estate service group:
Hawaii Shopping Center Corporation
Hawaii Management Corporation
Hawaii Real Property Corporation
Don R. Cowell & Associates, Inc.
Pacific Lighting Exploration Company
Pacific Lighting Gas Development Company
Pacific Lighting Properties, Inc.
Pacific Offshore Pipeline Company
Uni-Plant Corporation
Uni-Plant Leasing Company, Inc.

-1970 Annual Report

Recent agribusiness acquisitions - see following page
Regarding pesticide testing see FMC report, page 22.

Interconnecting Directorates

Caterpillar Tractor Co.; Del Monte Corp.; Crocker National Corp. (2) Pacific Telephone and Telegraph Co. (2); Bekins Co,; Bank of America N.T. & S.A. (2); Bankamerica Corp.; Cooper, White and Cooper (law); California Federal Savings and Loan Association; Broadway-Hale Stores Inc.; Santa Fe Industries; Mutual of New York; Wells Fargo & Co.; Leslie Salt Co.; Schilling Estate Co.; Gibson, Dunn, & Crutcher (law); Pacific Mutual Life Insurance Co.; Unionamerica Corp.; Times Mirror Corp.; Western Airlines, Inc.; Bull, Field, Volkmann & Stockwell (architects); Foremost-McKesson Inc. (2); Allied Properties, among others.

Agriculture

W. D. Fowler and Sons Corporation
Headquartered at Terra Bella in the prolific San Joaquin Valley of California, the company is engaged primarily in contract services such as land acquisitions, farming, packing, and the marketing of land and products in Tulare, Kern and Madera counties for investor-owners.

One of Fowler's most interesting and profitable areas of operation is pistachio nuts, and its full-cycle operation—from the nursery through harvesting and marketing—is the largest of its kind in the United States. The company's founder and current President, W. D. Fowler, pioneered development of pistachio nuts as a commercially feasible tree crop in California. Because of limited domestic production, most of the pistachio nuts consumed in this country at present are imported from Iran and the Mediterranean area, thus creating an attractive growth potential in the U.S. for the high-quality California variety.

During 1970, Fowler increased the harvest from its grove of mature trees at Terra Bella from 43,000 to 60,000 dry pounds. It completed planting new groves of pistachio trees on 1,440 acres of land near Madera and sold out approximately half of the acreage to private investors. It also acquired an additional 2,000 acres of land in the Madera area.

In addition to the rapidly expanding pistachio operation, Fowler manages prune, olive and citrus crop acreage for private investors. The company increased its managed acreage of oranges by 600—to a total of 3,140 acres—all in the Terra Bella area. A small citrus packing house, which it owns, more than doubled its output—to 500,000 boxes of fruit—despite growing conditions which limited the 1970 crop. Fowler also acquired approximately 700 acres of selected citrus groves in the central San Joaquin Valley in 1970.

Key executives of Fowler are W. D. Fowler, President; Glen Fowler and D. N. Fowler, Vice Presidents.

20 Part III—Fri., May 14, 1971 Los Angeles Times ★

Pacific Lighting to Buy Blue Goose Growers

BY RON S. HEINZEL
Times Staff Writer

Pacific Lighting Corp., Los Angeles, took another step in its diversification program Thursday with the announcement that it plans to acquire Blue Goose Growers Inc. for $22,560,000.

Paul A. Miller, president of the utility, announced the plan prior to the annual meeting in San Francisco. Miller said the transaction involves more than $3.6 million in cash, with the balance in notes and assumption of debt.

Included in the group of 28 entities are 10,026 acres of orchard and undeveloped land in California, Arizona, Florida and Maryland. Also included are six farm management companies, 12 packing houses, two regional marketing organizations and headquarters facilities in Fullerton.

Miller said the acquisition is scheduled for completion on June 1.

Expects Profit Gain

The Pacific Lighting president told shareholders the company expects a 25% increase in earnings this year over the $38.6 million or $2.03 per share realized in 1970.

Earnings could fluctuate by up to 40 cents a share for the balance of the year due to weather, he cautioned.

The company is engaged in several natural gas reserve projects in a hemisphere-wide effort to obtain future supplies for its more than 3.1 million customers in central and Southern California, he said.

While Southern California doesn't face the prospect of getting in line for gas, as do other parts of the country, sales of natural gas to large interruptable industrial customers such as power companies will have to be curtailed sharply until deliveries from new supply sources begin, he said.

PACIFIC MUTUAL LIFE INSURANCE COMPANY

523 West Sixth Street, Los Angeles, California

Financial Profile

Market Value:	$ 5,619,825,416	(34)*
Revenues:	$ 46,789,000	(32)*
Assets:	$ 917,560,195	(33)*
Net Profit:	$ 312,106	(23)*

* = ranking here is according to FORTUNE MAGAZIN Top 50 Insurance Compa rankings.

Physical Profile

No. of employees: 1300

Interconnecting Directorates

Litton Industries; Bankamerica Corp.; Bank of America, N.A. & S.A.; Security Pacific National Bank, Carnation Co.; Crocker National Corp.; Gibson, Dunn & Crutcher (law); Pacific Telephone and Telegraph (2); Del Monte Corp.; Broadway-Hale Stores Inc.; American Telephone and Telegraph Co.; Western Bancorporation (6); Getty Oil Co.; Pacific Lighting Corp.; Unionamerica Corp.; Wells Fargo & Co.; PPG Industries Inc.; Griffith Co.; American Airlines Inc.; Southern California Edison Co. (5); Newhall Land and Farming Co. (2); Joshua Hendy International Corp. (steamship operators); Standard Oil of California; International Telephone and Telegraph Co.; Mailliard & Schmiedell; Southern Pacific Co.; Cyrus Mines Corp.; Barker Associated Companies; Western Pacific Railroad Co.; Yosemite Park and Curry Co.; Stanford University (trustee); Amfac, Inc., among others.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY

140 New Montgomery Street, San Francisco, California 94105

Financial Profile

Revenues:	$2,076,283,000
Assets:	$5,260,636,000
Net Profit:	$ 200,660,000

Physical Profile

No. of employees: 98,000

Chief Executive: Jerome W. Hall
Total Remuneration: $128,333
No. of Shares Owned/ Controlled By: 800

Interconnecting Directorates

Bekins Co.; Bankamerica Corp. (2); Bank of America N.T. & S.A. (2); American Potato Co.; Stanford Research Institute; Prudential Insurance Co.; Broadway-Hale Stores, Inc. (2); Standard Oil of California; Bank of California, N.A.; Stauffer Chemical Co.; Crocker National Corp. (3); New York Life Insurance Co.; Pacific Mutual Life Insurance Co. (2); Gibson, Dunn & Crutcher (law); Pacific Gas & Electric Co.; Di Giorgio Corp. (2); Pacific Lighting Corp. (2); Security Pacific National Bank (2); Ducommun, Inc American Telephone and Telegraph Co.; Garret McEnerney II (law); Southern California Edison Co.; Western Bancorporation; Newhall Land and Farming Co., among others.

PUREX CORPORATION

5101 Clark Avenue, Lakewood, California 90712

Financial Profile

Market Value:		$200,302,000
Revenues:	(490)	$325,343,000
Net Profit:		$ 4,303,000
Assets:		$252,385,000

Chief Executive: W.R. Tincher
Total Remuneration: $141,000
Value of Shares Owned/Controlled By: $770,000

Physical Profile

No. of employees: 8000

Divisions:
- Consumer Products
  - Grocery Products
  - Swimming Pool Products
    - Chemicals
    - Equipment
    - Industrial
  - Drugs and Toiletries
- Airmotive Engine Services
  - Aviation Group
- Industrial and Institutional Products Group
- Prosser Industries
  - Aerospace
  - Commercial
  - Navy Products
- Royal Homes Division

AGRICULTURAL GROUP

Freshpict Foods, Inc. is a producer, packer, and shipper of fresh vegetables, operating in California, Arizona and Colorado. Major commodities include lettuce, asparagus, celery, artichokes, canteloupes, broccoli, bell peppers, carrots and onions. In conjunction with the vegetable operations, a number of processing and field crops are grown. Max Feldbaum & Sons and Triple-M Packing are engaged in consumer packaging and the distribution of fruits and vegetables to retailers in the midwest and eastern seaboard areas.

Gonzales Potato Company harvests and processes potatoes for distribution to the potato chipping industry.

FERRY-MORSE SEED COMPANY

Produces and markets vegetable, flower and farm seeds throughout the United States and internationally. Leading vegetable seeds produced include: tomatoes, cucumbers, lettuce, bush beans, peas, radishes, carrots, beets, celery, corn and cabbage. Various farm seeds are produced, such as pasture grasses, alfalfa and milo maize. A tremendous variety of flower seeds are produced, including virtually every kind that is sufficiently popular to be marketed commercially.

Additional material concerning Agricultural Products on following page

Operation Notes

William R. Tincher, Chairman of the Board explains Purex's stand vis-a-vis the United Farm Workers Organizing Committee (AFL-CIO) see following page.

Interconnecting Directorates

L.W. Ludlow & Co. (retail lumber, fuel and real estate investments); Blyth & Co. (investment bankers); Gibson, Dunn & Crutcher (law); Santa Barbara Bay Corp.; Brunswig Drug Co., among others.

SHAREHOLDER: My comment concerns the Agriculture Division which is the only division that lost money last year. I don't believe you realize it but the contracts signed by the United Farm Workers Organizing Committee are illegal. Now, I quote the State Labor Code. As you know, the workers have nothing to do with whether these contracts are signed or not, and they opposed these contracts.

If these contracts are voided, as they legally can be, Purex can make money in the agricultural industry.

And I will quote the section of the California State Labor Code—

CHAIRMAN TINCHER: Let's assume you are correct, sir. Can we get to your question? I think we have a lot of people with questions.

SHAREHOLDER: Okay. What I would like to comment on is, number one, the contracts signed by Purex with the United Farm Workers Organizing Committee are illegal. Let's state that first of all—

CHAIRMAN TINCHER: Let's assume that is correct.

SHAREHOLDER: Why did Purex sign the contracts in the first place?

CHAIRMAN TINCHER: I explained that in great detail last year. In essence, we got blackmailed into it. We lost $800,000 in agricultural operations last year. If we had had to face all the united liberals in this country, fighting Cesar Chavez, saying we wouldn't even recognize his Committee, we would have lost about $8 million in grocery products.

SHAREHOLDER: Wouldn't it have been better to have staged an educational campaign to inform people around the country that the employees did not wish to join this Organizing Committee?

CHAIRMAN TINCHER: We studied that. As a matter of fact, we hired outside public relations experts and we spent hours and hours and hours. We drew up position papers. We figured out what a campaign would cost us.

We were prepared to do whatever was necessary. We found out the cold, hard facts of life, as I said, last year.

The grocers said, "We sympathize with you but we don't want any part of UFWOC and Chavez. We appreciate your problems but get these nuts away from circling our stores and throwing our merchandise inside the store on the floor. It's your problem."

It was a situation none of us liked. If we hadn't done what we did, though, we wouldn't have been inside the grocery and the drug stores with $150 million worth of products with high profit margins.

SHAREHOLDER: Now, why don't you appeal to the Labor Law Enforcement and the Attorney General to enforce the Labor Laws of the State of California?

CHAIRMAN TINCHER: Well, I don't know quite what you are getting at, sir. We all know that every piece of legislation on farm activities that has been introduced in this legislature—both houses are controlled by one party—we know that every piece of legislation that has been proposed has been defeated, including the latest day before yesterday.

SHAREHOLDER: The California State Labor Code applies to these contracts as well as to other contracts. I think a big corporation like Purex could lead the way to provide freedom for these farm workers.

CHAIRMAN TINCHER: I can only assure you life is seldom black or white. Life is seldom as simple as you are making it sound. From a legal point of view, we have extremely good legal counsel. We have exhausted all possibilities and so far, as a result, nothing has been able to have been accomplished.

If you figure that we have been remiss somehow, that this is a very simple legal matter, and that these contracts can be declared illegal, we would certainly enlist your support and ask you to accomplish this for us. We, our attorneys, and the attorneys of others who have been involved, have not been able to see it as a simple matter.

Agricultural Products

The establishment of the Purex Agricultural Group by the acquisition of Valley Packing Company of Salinas, California and Brock Ranches, Inc. of El Centro, California in 1968 gave a new dimension to Purex's consumer products operations.

Following the management decision that diversification into agriculture would be a profitable step, a number of small, well-managed agricultural operations were acquired in 1968 and 1969. Purex's philosophy in developing its agricultural operation has been to establish a widely diversified crop program, endeavoring to balance out to consumer needs and production schedules.

As a result of the rapid but careful expansion of the past two years, the Purex Agricultural Group is operating profitably in the agricultural areas it originally planned. It has acquired good management and small shares of most of the crops it desired, and it now plans to consolidate its position and improve its operating techniques and efficiency.

On June 30, 1970 Purex received notice of a proposed complaint by the Federal Trade Commission challenging its acquisition of a number of relatively small fresh-produce companies on the ground that the action may lessen competition in the fresh produce market. Purex feels the charge is not meritorious since its agricultural acquisitions amount to only a minute fraction of the produce business and therefore cannot logically be considered as reducing competition. As of this date Purex has not yet received a formal complaint from the FTC and is working with the FTC to dispose of the matter by a consent settlement without litigation.

In the field of labor relations, Purex recognizes that unions in agricultural production will be a permanent reality and believes that farm workers have as much right to representation as any others. Many of our agricultural employees are presently unionized and an effort is now being made in the Salinas Valley to determine which of two unions should represent the field workers. The company believes that responsible union influence is a good thing, but it favors legislation to eliminate boycotts and harvest time strikes, which are unfair to both consumers and farm owners.

Despite the proposed FTC complaint and the current uncertainties of agricultural labor relations, Purex management believes strongly that its entry into the production and marketing of agricultural consumer product was a wise move which should prove increasingly profitable through the years. It is confident that the company's agricultural operations will continue to contribute substantially to profitable growth.

SAFEWAY STORES INC.

201 Fourth Street, Oakland, California 94604

Financial Profile

Market Value:	(124)	$ 866,932,000
Revenues:	(14)	$4,860,167,000
Assets:	(315)	$ 875,705,000
Net Profit:	(100)	$ 68,892,000

Chief Executive: Quentin Reynolds
Total Remuneration: $155,000
Value of Shares Owned/Controlled By: $386,000

Physical Profile

Subsidiaries:

Canada Safeway Ltd. (100%) and its subsidiaries.
- Australian Safeway Ltd. (90%)*
  - Australian Safeway Stores, Pty. Ltd. (100%)
- Jasper Dairy Co. Ltd. (100%)
- Macdonalds Consolidated Ltd. (90%)*
  - Clearbrook Frozen Foods Ltd. (100%)
- Safeway Food Stores Ltd. (90%) *
- "Safeway" Supermarket Gmblt (West Germany) (90%)*
- Wingate Equipment Lessors Ltd. (100%)
- Canada Safeway International Finance Corp. (100%)*

(NOTE: % in parenthesis indicates voting power of Safeway Stores Inc.)

No. of employees: 78,000

Company properties - see following page

A 90-page study of Safeway Stores Inc. corporate profile is available through the Agribusiness Accountability Project, 1000 Wisconsin Avenue, N.W., Washington, D.C. 20007.

Interconnecting Directorates

Castle & Cooke Inc.; Amfac Inc.; Wells Fargo Bank. (2); Hewlett Packard Co.; Owens-Illinois Inc.; J.G. Boswell Co. (2); Bank of California, N.A.(2); Pacific Gas & Electric Co.; Shell Oil Co.; Frank B. Hall, Inc.; Utah Construction and Mining Co.; Security Pacific National Bank; Ridder Publications; Bath Industries; Caterpillar Tractor Co. Southern Pacific Co.; Fibreboard Corp.; Cutter Laboratories; Merrill Lynch, Pierce, Fenner & Smith (2), among others.

Safeway Stores Inc. operates 2303 stores in the United States (1963), Canada (263), Australia (27), United Kingdom (40), and West Germany (10), and employs 96,760 people.

In the United States the company operates:

23 distribution centers
12 bread baking plants
1 cake baking plant
1 cereal processing plant
2 cookie & cracker baking plants
3 coffee roasting plants
1 dressing & salad oil plant (Richmond, Calif.)
1 edible oil refinery & finished products plant (Denison, Texas)
1 fruit processing, margarine & dressing plant (Grandview, Washington)
1 household chemicals plant
1 jelly & preserves plant (San Leandro, Calif.)
1 soap plant (Oakland, Calif.)
14 ice cream plants
1 instant milk plant
15 milk plants
3 egg candling plants
3 meat processing plants
19 produce prepackaging plants
5 soft drink bottling plants
2 cheese pre-cutting plants

In Canada, through its subsidiary, Safeway Stores, Inc. operates:

3 bread baking plants
1 coffee roasting plant
4 fruit & vegetable canning plants
2 frozen fruit & vegetable processing plants
1 jam and jelly plant
3 ice cream plants
3 milk plants
3 egg candling plants
1 cheese pre-cutting plant

SEARS ROEBUCK AND COMPANY

303 East Ohio Street, Chicago, Illinois 60611

Financial Profile

Market Value:	(6)	$11,779,329,000
Revenues:	(5)	$ 9,262,162,000
Assets:	(25)	$ 7,623,096,000
Net Profit:	(9)	$ 464,201,000

Chief Executive: G.M. Metcalf
Total Remuneration: $375,000
Value of Shares Owned/Controlled By: $3,263,000

Physical Profile

No. of employees: 359,000

Stores:		
	Complete Department	255
	Medium Size	381
	Hard Line	191
	Catalog Order Plants	11
	Catalog Retail and Telephone Sales	2310
	Major Distribution Warehouses	69
	Service and Parts Centers	115

Subsidiaries:
- Homart Development
- AllState Enterprises Inc.
- AllState Savings and Loan Association
- AllState Insurance Co.

Interconnecting Directorates

Bank of America N.T. & S.A.; Crocker National Corp.; Commonwealth Edison Co.; Kraftco Corp.; Manufacturers Hanover Corp.; First National City Bank of New York (3); Quaker Oats Co.; Conill Corp. (2); American Telephone and Telegraph Co.; International Harvester Co.; United Air Lines; Royal Street Corp., among others.

SECURITY PACIFIC NATIONAL BANK

Post Office Box 2097, Terminal Annex, Los Angeles, California 90054

Financial Profile

Market Value:	(220)	$ 610,805,000
Revenues:	(329)	$ 505,802,000
Assets:	(20)	$8,038,070,000
Net Profit:	(145)	$ 54,765,000

Chief Executive: F.G. Larkin Jr.
Total Remuneration: $180,000
Value of Shares Owned/Controlled By: $73,000

Shareholders: 24,182 17,026,275 average shares outstanding

Physical Profile

No. of California locations: 415
No. of employees: 15,000

The Bank received a $39,276 ASCS subsidy in 1970.

Interconnecting Directorates

J.G. Boswell Co.; Safeway Stores Inc.; Carnation Co.; Pacific Mutual Life Insurance Co.; Getty Oil Co.; Litton Industries Inc. Pacific Telephone and Telegraph Co. (2); Ducommun Inc.; Times Mirror Co.; Santa Fe Industries; North American Rockwell Corp.; United Press International; Beckman Instruments Inc.; Brody Investment Co.; American Airlines; Kerr-McGee Corp.; Robert Dollar Co.; Essick Investment Co.; Lear-Siegler Inc.; California Portland Cement Co.; Southern Pacific Co.; George D. Hart Inc.; Farquhar & Heimbucher; Teledyne Ryan Aeronautical Co.; Superior Oil Co.; Lockheed Aircraft Corp.; Union Pacific Corp.; The Lurie Co.; Judsen Steel Corp.; Homestake Mining Co.; Purity Stores Inc.; O'Melveny & Myers (law); Cyrus Mines Corp.; Sunkist Growers; Lloyd Corp. Ltd.; Southern California Edison Co.(3); Newhall Land & Farming Co., among others.

SOUTHERN CALIFORNIA EDISON COMPANY

P.O. Box 351, Los Angeles, California 90053

Financial Profile

Market Value:	(73)	$1,300,516,000
Revenues:	(240)	$ 720,661,000
Assets:	(62)	$3,226,881,000
Net Profit:	(39)	$ 127,495,000

Chief Executive: J.K. Horton
Total Remuneration: $150,000
Value of Shares Owned/Controlled By: $78,000 (common stock)

Agricultural Revenues:	$18,871,000	+22.1% from 1969
Agricultural KWH Sales	1,151,937	+25.5% from 1969

- largest single item on the Company ledge

Physical Profile

Number of customers: 2,438,584
Number of employees: 12,000

Interconnecting Directorates

Bankamerica Corp.; Bank of America N.T. & S.A.; Pacific Mutual Life Insurance Co. (5); Western Bancorporation (3); Broadway-Hale Stores Inc. (3); Beckman Instruments Inc.; Security Pacific National Bank (3); American Telephone and Telegraph Co.; Del Monte Corp.; California Cotton Oil Corp.; Pacific Telephone and Telegraph Co.; Lockheed Aircraft Corp.; Carnation Co.; Getty Oil Co.; Gerald H. Phillips Inc. (general contractor); Lloyd Corp. Ltd.; Buffums' (department store); Amfac, Inc., among others.

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SOUTHERN PACIFIC COMPANY

65 Market Street, San Francisco, California 94105

Financial Profile

Market Value:	(109)	$ 985,890,000
Revenues:	(117)	$1,272,289,000
Assets:	(66)	$3,066,260,000
Net Profit:	(56)	$ 106,766,000

Chief Executive: B.F. Biaggini
Total Remuneration: $190,000
Value of Shares Owned/Controlled By: $105,000

Freight Revenues:	Farm products	$119,341,000	+4.9%
	Food & kindred products	$148,706,000	+4.6%
	Chemicals and allied products	$106,876,000	+6.4%

Physical Profile

Own 3,845,969 acres of land - see map on following pages
Operate 21,206.52 miles of track
Possess mineral and royalty interests on another 1,334,741 acres

Southern Pacific Land Co. (a subsidiary - see following pages) has about 173,000 acres of land in agriculture, principally in California.

Number of employees: 41,000

Companies and subsidiaries - see following pages

The Company has 50% ownership (with Union Pacific) in Pacific Fruit Express which operates over 2600 cars at a cost of $83,000,000.

In 1970 the Company located 529 new industries along their lines. They expect a similar growth rate in 1971.

ASCS Subsidy Payments and leased farm land --- see following pages

The Southern Pacific Development Co. (a subsidiary) has approximately $23 million and $2 million in cash.

Interconnecting Directorates:

Safeway Stores Inc.; J.G. Boswell Co.; Bank of California, N.A.; Fibreboard Corp.; Merrill Lynch, Pierce, Fenner and Smith; Caterpillar Tractor Co. (2) Bechtel Corp.; General Motors; Crocker National Bank; Cyrus Mines Corp.; Western Bancorporation (2); Pacific Mutual Life Insurance Co.; Lehman Bros. (investment bankers); IBM Corp.; FMC Corp.; California Portland Cement Co Security Pacific National Bank; Chemical New York Corp.; Harr Upham & Co.; Pacific Gas & Electric Co.; (continued on follow

Interconnecting Directorates (cont'd)

New York Life Insurance Co.; International Telephone and Telgraph Co.; Willamette Industries; Newhall Land & Farming Co.; Del Monte Properties Inc.; Tenneco, Inc.; Association of American Railroads, among others.

Leased land in 1969:

Fresno County, California

Giffen, Inc.	31,303.11 acres	Net Profit & Income $325,607.
*Vista Del Llana	7,180.51 acres	Net Profit & Income $ 84,851.
Jack Harris Inc.	2,951.26 acres	Net Profit & Income $ 84,446.

Kern County, California

Producers Cotton Oil Co.	4,448.85 acres	Net Profit & Income $109,881.

Leased land in 1970

Fresno County, California

Giffen, Inc.	21,312.94 acres	Net Profit - $422,231
Jack Harris Inc.	2,951.26 acres	" " - $108,505
H.C. Reece	2,651.84 acres	" " - $ 74,555
*Vista Del Llama	7,180.19 acres	" " - No report

* = Owned by Anderson Clayton & Co.

ASCS Subsidy Payments to Company

1966	S.P. Land Company	$ 31,016
1967	S.P. Land Company	$ 50,400
1968	S.P. Land Company	$ 54,917
1969	S.P. Company	$161,068
1970	S.P. Land Company	$ 71,757
	S.P. Transportation Co.	$ 72,404
		$441,562

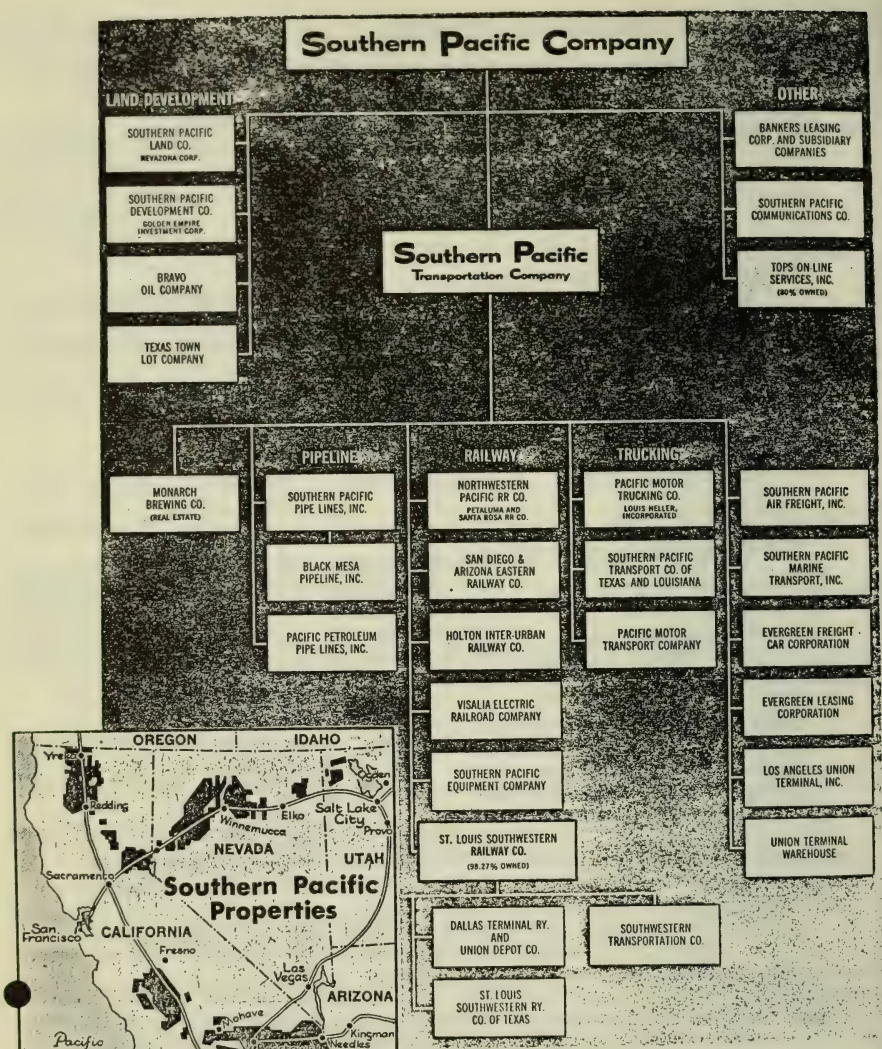
Southern Pacific Co. owns 78,923 acres which is "eligible" for federally subsidized water in the Westlands Water District.

As of July 30,1970 none of this acreage was under recordable contract vis-a-vis the provisions of the 160-acre reclamation laws.

Southern Pacific Land Co. owns 30,056 acres which is "eligible" for federally subsidized water in the Westlands Water District.

As of July 30,1970 none of this acreage was under recordable contract vis-a-vis the provisions of the 160-acre reclamation laws.

Company contributed $7000 to California Governor Ronald Reagan's 1970 primary campaign.



The New York Times Feb. 25, 1970

STANDARD OIL COMPANY OF CALIFORNIA

P.O. Box 3495, San Francisco, California 94120

Financial Profile

Market Value:	(18)	$4,623,617,000
Revenues:	(17)	$4,187,762,000
Assets:	(27)	$6,593,551,000
Net Profit:	(10)	$ 454,817,000

Chief Executive Officer: O.N. Miller
Total Remuneration: $250,000
Value of Shares Owned/Controlled By: $682,200

Physical Profile

No. of employees: 45,000

Principal subsidiaries and affiliates - see following page

Land Development

Chevron Land and Development Company, a subsidiary, expanded programs for development of Standard's Western U. S. landholdings.

In early 1971, Standard granted an independent development group an option on 110 acres of land in Richmond, California, for a major regional shopping center. The developers plan a multimillion-dollar center with national department stores, plus 125 mall stores. Sizable adjacent acreage, held by Chevron Land, will be appropriately developed.

Construction was started at El Segundo, California, on the first high-rise office building and site improvements in the new International Center, a planned commercial community with more than $250 million in possible future projects. Chevron Land holds a half interest in the venture, located near the Los Angeles International Airport. Standard owns sizable additional acreage immediately adjacent to the development.

Chevron Land is actively engaged in the development of other major landholdings throughout California.

Standard Oil of California owns 306,000 acres of land in California, most of it in agriculture.

Operation Notes

ASCS Subsidy Payments:

1970	$132,139
1969	$121,254
1968	$ 36,230
1967	$ 39,395
1966	$ 27,298
	$356,316

Interconnecting Directorates

Pacific Telephone & Telegraph Co.; Bank of America NT & SA; (2); Bankamerica Corp. (2); Prudential Insurance Co.; Stanford Research Institute (2); Broadway-Hale Stores, Inc (2); American Potato Co.; Di-Giorgio Corp.; Time Inc.; Kaiser Industries; Consolidated Foods; I T & T; Boeing Co.; Western Bancorporation (2); Crocker National Corp.; Pacific Mutual Life Insurance Co.; Joshua Hendry International Corp. (steamship operators), among others.

FIGURES IN PARENTHESES ARE PERCENTAGE OF COMPANY INTEREST	PRINCIPAL BUSINESS	PRINCIPAL AREAS OF OPERATION
[illegible]ed States		
STANDARD OIL COMPANY OF CALIFORNIA	Exploration, Producing Transportation, Refining and Marketing Management	California, Washington, Oregon, Arizona, Nevada, Northern Idaho, Alaska and Hawaii
STANDARD OIL COMPANY OF CALIFORNIA, WESTERN OPERATIONS, INC (100)	Service Station Operation	
STANDARD STATIONS, INC (100)	Gas Transportation	Louisiana and Mississippi
CHANDELEUR PIPE LINE COMPANY (100)	Refining and Marketing	United States and Puerto Rico
CHEVRON ASPHALT COMPANY (100)	Asphalts and Asphalt Emulsions	
CHEVRON CHEMICAL COMPANY (100)	Agricultural and Industrial Chemicals Service Company	United States and Foreign
CHEVRON COMMERCIAL COMPANY, INC. (100)	Marketing	New York and Washington, D C.
CHEVRON INTERNATIONAL OIL COMPANY, INC. (100)	Land Planning and Development	United States and Foreign
CHEVRON LAND AND DEVELOPMENT COMPANY (100)		California and Washington
CHEVRON OIL COMPANY (100)	Refining and Marketing	Eastern States
EASTERN DIVISION	Geophysical Surveys	United States and Canada
GEOPHYSICAL DIVISION	Marketing	Indiana, Louisiana, South Carolina and Tennessee
SOUTHERN DIVISION	Exploration and Producing	Central, Eastern and Southeastern States, Southern and Eastern Texas
THE CALIFORNIA COMPANY	Exploration and Producing	Rocky Mountain and Plains States, Northern and Western Texas
WESTERN DIVISION	Refining and Marketing	Rocky Mountain and Plains States, Texas and New Mexico
CHEVRON OIL FIELD RESEARCH COMPANY (100)	Oil Field Research and Development	California
CHEVRON PIPE LINE COMPANY (100)	Oil Transportation	Colorado, Idaho, Louisiana, Mississippi, New Mexico, Oregon, Texas, Utah and Washington
CHEVRON RESEARCH COMPANY (100)	Research and Development	California
CHEVRON SHALE OIL COMPANY (100)	Shale Lands	Colorado
CHEVRON SHIPPING COMPANY (100)	Marine Transportation Management	United States and Foreign
CHEVRON STATIONS, INC. (100)	Service Station Financing	United States
STANDARD OIL COMPANY (KENTUCKY) (100)	Refining and Marketing	Alabama, Florida, Georgia, Kentucky and Mississippi
STANDARD PIPE LINE COMPANY (100)	Oil Transportation	California
HUNTINGTON BEACH COMPANY (63.64)	Owns Oil Royalties and Land	California
AMERICAN GILSONITE COMPANY (50)	Producing and Refining Gilsonite	Utah and Colorado
[illegible]AI PIPE LINE COMPANY (50)	Oil Transportation	Alaska
[illegible]STATION PIPE LINE COMPANY (27.13)	Oil Transportation	Southeastern States
Canada		
CHEVRON ASPHALT LIMITED (100)	Asphalt Emulsions	Canada
CHEVRON CHEMICAL (CANADA) LIMITED (100)	Agricultural and Industrial Chemicals	Canada
CHEVRON STANDARD LIMITED (100)	Exploration and Producing	Western Canada
STANDARD OIL COMPANY OF BRITISH COLUMBIA LIMITED (100)	Exploration, Producing, Refining and Marketing	Western Canada
IRVING OIL COMPANY, LIMITED*	Marketing	Eastern Canada
IRVING REFINING LIMITED*	Refining	Eastern Canada
Mexico, Central and South America, Caribbean Area		
ASFALTOS CHEVRON S. A. (99.99)	Asphalt Products	Brazil
CHEVRON CHEMICAL PAN AMERICAN COMPANY (100)	Industrial Chemicals	Mexico, Central and South America
CHEVRON OIL BAHAMAS LIMITED (100)	Owns 35% Interest in Bahamas Refinery	Bahama Islands
CHEVRON OIL COMPANY OF VENEZUELA (100)	Exploration, Producing and Refining	Venezuela
CHEVRON OIL LATIN AMERICA, INC. (100)	Refining and Marketing Management	Central America, Puerto Rico and Peru
CHEVRON PETROLEUM COMPANY OF COLOMBIA (100)	Exploration, Producing and Oil Transportation	Colombia
Middle East		
ARABIAN AMERICAN OIL COMPANY (30)	Exploration, Producing and Refining	Saudi Arabia
IRAN CALIFORNIA OIL COMPANY (100)	Owns 7% Interest in Iranian Oil Operations	Iran
Other Foreign Areas		
AMERICAN OVERSEAS PETROLEUM LIMITED (50)	Exploration and Producing Management	Libya and Indonesia
CALIFORNIA ASIATIC OIL COMPANY (100)	Exploration and Marketing Producing Exploration	Eastern Hemisphere Libya, Nigeria, Spain and Western Australia North Sea Area
CALIFORNIA OIL (U. K) LIMITED (100)	Refining and Marketing	France, Spain and Turkey
CALTEX MEDITERRANEAN COMPANIES (50)	Exploration and Producing	Indonesia
P. T. CALTEX PACIFIC INDONESIA (50)	Exploration and Producing	Bahrain Island
CALTEX PETROLEUM COMPANIES (50)	Refining and Marketing	Eastern Hemisphere except Western Europe and portions of West Africa
CHEVRON CHEMICAL COMPANY, S. A. F. (98.85)	Agricultural Chemicals	Eastern Hemisphere
CHEVRON CHEMICAL INTERNATIONAL, INC (100)	Industrial Chemicals	Foreign
CHEVRON FINANCE N. V. (100)	Foreign Financing and Investments	Foreign
CHEVRON OIL EUROPE, INC. AND SUBSIDIARIES (100)	Refining and Marketing	Belgium, Denmark, Italy, Luxembourg, Switzerland, The Netherlands, United Kingdom and West Germany
[illegible]		
CHEVRON OIL SALES COMPANY (100)	Marketing	Foreign
CHEVRON OIL TRADING COMPANY (100)	Marketing	Foreign
CHEVRON OVERSEAS FINANCE COMPANY (100)	Foreign Financing and Investments	Foreign
CHEVRON OVERSEAS PETROLEUM INC (100)	Exploration and Producing Management	Foreign
CHEVRON TANKING (NETHERLAND) N V (100)	Marine Transportation	Worldwide
CHEVRON TANKSHIP (U. K) LIMITED (100)	Marine Transportation	Worldwide
CHEVRON TRANSPORT CORPORATION (100)	Marine Transportation	Worldwide
INTERNATIONAL BITUMEN EMULSIONS CORPORATION (100)	Asphalt Emulsions	North and South America and Pacific Area
OVERSEAS TANKSHIP CORPORATION (100)	Marine Transportation	Worldwide

*Companies owned jointly with the Irving interests

STOKELY-VAN CAMP, INC.

941 North Meridian Street, Indianapolis, Indiana 46206

Financial Profile

Market Value:	$102,845,000
Revenues:	$274,640,000
Assets:	$168,542,000
Net Profits:	$ 4,302,000

Chief Executive: Alfred J. Stokely
Total Remuneration $84,502
No. of Shares Owned/Controlled By: 20,000

Physical Profile

No. of employees: 7000

Canned Foods Division—Processor and distributor of the *Van Camp's* quality line of non-seasonal canned foods including the number one selling Pork and Bean, a full line of canned seasonal fruits and vegetables sold under the *Stokely's Finest* label and drinks including Gatorade the original thirst quencher.

General office: 941 North Meridian Street, Indianapolis, Indiana

Operations:

CALIFORNIA/Lodi, Los Angeles, Oakland* Oroville, Oxnard, Santa Cruz
IDAHO/Emmett
ILLINOIS/Gibson City, Hoopeston, Rochelle
INDIANA/Indianapolis,* Peru, Tipton*
KANSAS/Lawrence*
MICHIGAN/Caro, Croswell, Hart, Scottville
MINNESOTA/Fairmont, Lakeland
NEW JERSEY/Trenton*
OHIO/Celina, Curtice,* Norwalk, Paulding
TENNESSEE/Newport,* Tellico Plains
TEXAS/Dallas*
WISCONSIN/Appleton, Columbus, Cumberland, Frederic, Holmen, Horicon, Plymouth

*Non-seasonal operations conducted in canning plants at these locations.

Frozen Foods Division—Processor and distributor of frozen vegetables, fruits and other products which are distributed under the *Stokely's Finest* and *Pictsweet* labels.

General office: 970 North Meridian Street, Indianapolis, Indiana

Operations:

CALIFORNIA/Oxnard, San Jose
FLORIDA/Haines City
INDIANA/Indianapolis
MINNESOTA/Fairmont, Winnebago
OREGON/Albany
WASHINGTON/Auburn, Kent, Mount Vernon, Stanwood, Zillah

(continued on the following page)

Interconnecting Directorates

Merchants National Bank & Trust; Indiana Canners Association; Rockford Can Co.; L.S. Ayres & Co.(2); Ball Corp.; American National Bank & Trust; Calvert Exploration Co.; American Fletcher Bank (Indiana); Indiana Bell Telephone Co.; Indiana Power and Light Co.; American United Life Insurance Co.; K-B Farms, Inc., among others.

Capital City Products Division—Processor of food oils to produce highly specialized products which are utilized by other processors as ingredients.

General office and operations: 525 West First Avenue, Columbus, Ohio

Pomona Products Division—Distributes and processes, primarily under the popular *Sunshine label,* a line of southern vegetables. The major marketer of Pimientos in the U.S.

General office and operations: Griffin, Georgia

Kuner Empson Company Division—Distributes in the Rocky Mountain and Plains Areas a line of canned fruits and vegetables under the *Kuners* label.

General office and operations: Brighton, Colorado

Purity Mills Division—Processor of unpopped popcorn sold primarily under the *Popeye* and *Betty Zane* labels and puffed wheat and rice with the *Popeye* label.

General office: Dixon, Illinois

Operations:
Illinois/Dixon
Indiana/Clarks Hill
Ohio/Marion

Can Manufacturing Division—Manufacturer of cans from tin plate supplied to other divisions for use in cann operations.

General office: 941 North Meridian Street, Indianapolis, Indiana

Operations:
California/Lodi
Indiana/Indianapolis
Tennessee/Newport
Illinois/Rockford

SUBSIDIARIES

M. W. GRAVES & COMPANY, LTD. and CANADA FOODS, LTD., Berwick, Nova Scotia, Canada
Distributors and processors of canned and frozen vegetables and fruits sold in Maritime Provinces Canada under their own labels.

HAWAIIAN FRUIT PACKERS, LTD., Kapaa, Kauai, Hawaii
Packer of pineapple products for sale by and use of the parent company.

STOKELY-VAN CAMP OF CANADA, LTD., Essex, Ontario, Canada
Processor and distributor of canned vegetables distributed in Prairie Provinces of Canada under its c label.

STOKELY-VAN CAMP OF PUERTO RICO, Manati, Puerto Rico
Sales Corporation.

SUNKIST GROWERS INC.

Financial Profile

Sales: $314,000,000 ($252,000,000 came from the sale of fresh fruit alone)

Chief Executive Officer: Roy Utke
Total Remuneration: Not available

Physical Profile

A non-profit cooperative which serves 8500 citrus growers in California and Arizona and markets over 70% of fresh citrus shipments from the two states.
114 packing houses are organized into twenty regional exchanges which in turn elect Sunkist's 32-man Board of Directors

Among the members of Sunkist are:
Berylwood Investment Co. (Kaiser Aluminum and Chemical Co.)
Blue Goose Growers Inc. (Pacific Lighting Corp.)
Giffen Ranch (Russel Giffen)
The Irvine Company (Irvine Foundation)
Newhall Land and Farming Co.
Rancho Sespe (California Institute of Technology)
S.A. Camp Ginning Co.

Interconnecting Directorates

Security Pacific National Bank, Newhall Land and Farming Co., Castle and Cooke, Inc. Valencia Water Co., Fillmon-Piru Citrus Association, Ventura County Citrus Association, Las Pasas Orchard, among others.

TEJON RANCH

Financial Profile

Market Value:	$11,006,678
Revenues:	$ 3,654,818
Assets:	$ 7,302,686
Net Profit:	$ 1,263,663

Chief Executive Officer: Howard H. Leach
Total Remuneration: Not Available
No. of Shares Owned/Controlled By: None

Physical Profile

Map, divisional income, farm crop acreage, and year end cattle inventory - see following pages

Owns 290,000 acres of land

Recently sold 197 acres of table grapes for $172,653.

Also sold 2225 acres of irrigated farm land in Arvin-Edison Water Storage District for $518,866 (all but 80 acres of which were subject to the Federal 160-acre limitation act).

Operation Notes

ASCS Subsidy Payments

1970	$180,046
1969	$133,501
1968	$104,255
1967	$115,802
1966	$121,096
	$654,700

Stockholders: 1700
Common stock outstanding: 1,248,844 shares (March 1,1971)
Times-Mirror Co. owns 150,848 shares (12.8%)
Chandis Securities Co. (wholly-owned by the Times-Mirror Chandler family) owns 63,425 shares (5.8%)

Interconnecting Directorates

Times Mirror Co. (2); Maquinaria y Camiones (Mexican farm equipmen Gibson, Dunn & Crutcher; Signal Companies; W.M. Garland Co. (re estate broker); M.H. Sherman Co.; Ardell Investment Co.; Pruden Insurance Company of America (Sr. VP); Weisman & Dreisen (law); Western Pacific Railroad Co., among others.

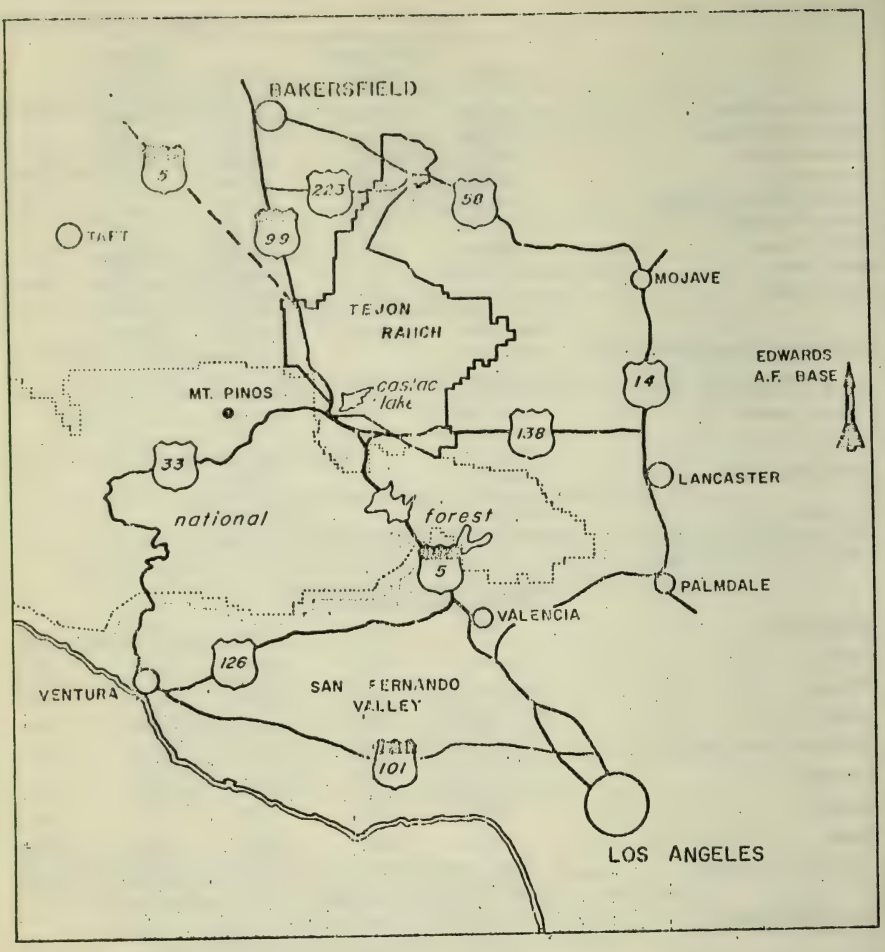
	1970		1969	
	Income	Per Cent of Income	Income	Per Cent of Income
Oil and Gas Income	$ 376,620	10.3%	$ 433,576	14.0%
Other Mineral Income	207,568	5.7	178,135	5.7
Livestock Income	1,269,128	34.7	958,445	30.9
Range Rent	88,685	2.4	87,580	2.8
Farming Rents & Revenues	1,120,733	30.7	872,371	28.1
Commercial Income	112,906	3.1	119,442	3.9
Interest Income	377,436	10.3	228,792	7.4
Water Sales	25,880	0.7	89,851	2.9
Other Income	75,862	2.1	133,801	4.3
	$3,654,818	100.0%	$3,101,993	100.0%
Operating & Administrative Expense	2,843,778		2,302,809	
Operating Income	$ 811,040		$ 799,184	
Taxes on Income	309,909		296,938	
	$ 501,131		$ 502,246	
Extraordinary Items	762,532		182,900	
Net Income	$1,263,663		$ 685,146	

FARM CROP ACREAGE

Irrigated Acres	1970	1969	1968	1967	1966
Cotton	4,406	4,293	4,078	3,523	3,587
Potatoes	3,759	3,899	3,904	4,334	4,529
Alfalfa	225	928	1,189	1,434	1,481
Grain and Miscl. Vegetables	7,061	7,309	8,246	7,152	5,365
Vineyard	372	372	375	352	360
Oranges	501	501	373	373	373
Fallow	3,517	4,002	2,981	2,267	2,666
	19,841	21,304	21,146	19,435	18,361
Non-Irrigated Acres					
Wheat	2,270	2,080	3,002	3,436	2,806
Barley	1,981	1,194	951	761	1,529
Fallow	4,873	4,108	3,985	3,741	3,795
	9,124	7,382	7,938	7,938	8,130
TOTAL ACREAGE	28,965	28,686	29,084	27,373	26,491

YEAR END CATTLE INVENTORY

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Tejon Breeding Herd	5,877	7,056	7,633	7,897	8,169	8,956	9,034	9,276	9,798	9,411
Purchased Stockers	398	668	958	1,641	2,565	2,131	2,279	3,436	4,981	5,185
Total Head	6,275	7,724	8,591	9,538	10,734	11,087	11,313	12,712	14,779	14,596



INDEX MAP

The strategic location of the Tejon Ranch is apparent from the map shown above. With excellent access provided by Federal and State highways, the Ranch is in close proximity to Southern California growth areas. Interstate Route 5 will establish a divided 8-lane freeway to Los Angeles and other Southland communities, and, when finished to the north, will afford the most direct route to the San Francisco Bay Region. When completed, recreational facilities of two major Feather River Project Reservoirs (Pyramid and Castaic) will be within easy driving range of the Ranch, as well as the planned intercontinental jet airport near Palmdale. Since the vast acreage located within the Los Padres National Forest is unavailable for private development, the Tejon Ranch lands are among the closest to Los Angeles that are still undeveloped.

- 1970 Annual Report

TENNECO INC.

P.O. Box 2511, Houston, Texas 77001

Financial Profile

Market Value:	(58)	$1,546,312,000
Revenues:	(43)	$2,524,740,000
Assets:	(46)	$4,343,793,000
Net Profit:	(27)	$ 157,809,000

Chief Executive: N.W. Freeman
Total Remuneration: $178,000
Value of Shares Owned/Controlled By: $1,358,000

Physical Profile

No. of employees: 60,000

Subsidiaries - see following page

Tenneco West, Inc. as of December 30, 1970

	Land Owned	Land Leased	Total
California	362,540	33,698	396,238
Arizona	604,462	486,575	1,091,037
			1,487,275

128,954 net acres are devoted to irrigated farm lands - 42,020 farmed by Tenneco while the rest is leased
Recently sold 30,000 acres to Roberts Farms Inc. for $15,000,000 - see clipping on following page and Page

ASCS Subsidy Payments:

H.M. Tenneco 1970	$1,317,051
Kern Co. Land 1969	$ 974,163
Kern Co. Land 1968	$ 669,741
Kern Co. Land 1967	$ 838,130
Kern Co. Land 1966	$ 652,057

Interconnecting Directorates

Cameron Iron Works Inc.; Southern Pacific Co.; Association of American Railroads; Harris Upham & Co. Inc.; Baker and Botts (law); First National Bank of Chicago, and numerous Tenneco Inc. subsidiaries among others.

SUBSIDIARIES
(100% owned except as noted)
TENNESSEE GAS TRANSMISSION CO.
Channel Industries Gas Co.
East Tennessee Natural Gas Co.--90%
Midwestern Gas Transmission Co.--88%
Tennessee Gas Pipeline Co.
TENNECO CORP. (85%)
TENNECO OIL CO.
Domestic--
Blue Flame Gas Corp.
Collins Pipeline Co.
Direct Oil Corp.
Marlin Drilling Co., Inc.
Mitchell Supreme Fuel Co.
Red Diamond Oil, Inc.--80%
Southwest Sprayer and Chemical Co.
Tenbarco Corp.
Tenneco Laurel Corp.
Tenneco Production Co.
Foreign--
Globe Petroleum Sales, Ltd.
Tenneco Angola, Inc.

KCL CORPORATION
Casa de los Cuestos, Inc.
KERN COUNTY LAND CO.
Boquillas Cattle Co.
Kerndand Farming Co.
Stockdale Development Corp.
Victonia Land and Cattle Co.
HEGGBLADE-MARGULEAS CO.
California Almonds, Inc.
Heggblade-Margulcas Co. Texas
Kern County Canal and Water Co.
Mar-Vel Farms

Tenneco Australia, Inc.
Tenneco Dominican Republic, Inc.
Tenneco Ethiopia, Inc.
Tenneco Guatemala, Inc.
Tenneco Holland, Inc. Gebr. Broere N. V.
Tenneco Indonesia, Inc.
Tenneco Malagasy, Inc.
Tenneco Netherlands, Inc.
Tenneco Oil & Minerals, Ltd.
Tenneco Oil Co. of Argentina
Tenneco Oil Co. of Nigeria
Tenneco Saudi Arabia, Inc.
Tenneco South Africa, Inc.
Tenneco Thailand, Inc.
Tenneco Venezuela, Inc.
West Africa Corp.
TENNECO CHEMICALS, INC.
Domestic--
American Plastics Division
Cal/Ink Division
General Foam Division
Genset Corp.
Heyden Division
Newport Division
Nixon-Baldwin Division
Nuodex Division
Petro-Tex Chemical Corp.--50%
Southeastern Aniline Co.
Tenneco Advanced Materials Division
Tenneco Colors Division
Tenneco Hydrocarbon Chemicals Division
Tenneco Plastics Division
Foreign--
Butler Chemicals Ltd.
Butler Malros, Ltd.
Caligen Foam Ltd.--50%
Cal/Ink Chemical Co., of Canada, Ltd.
Calink Chemicals (Japan) Ltd.
Crown General International, S. A.
Leim Chemie G.m.b.H.
N. V. Transicol
Newport Mexicana, S. A. de C. V.--65%
Nuodex (Australia) Pty. Ltd.--51%
Nuodex Canada, Ltd.--51%
Nuodex France S.A.R.L.--50%
Nuodex Italiana S.p.A.--33 1/3%
Nuodex Ltd.--50%
Resinera del Tigre, S. de R. L. de C. V.
S. A. Ferdinand Dobler--92%
South African Paper Chemicals Co. (Pty.) Ltd.--60%
Tenneco Quimica de Mexico, S. A.
Venezolana de Resinas, C. A.--33 1/3%

Precooling Services, Inc.
Statewide Packing Co.
Tenneco Food Products Co.
TENNECO PROPERTIES INC.
TENNESSEE OVERSEAS CORP.
INVESTMENTS
Domestic--
Deepsea Ventures, Inc.--91%
Houston National Co.--40%

PACKAGING CORPORATION OF AMERICA
Abco Cartage Co.
EPCO Inc.
Tampco, Inc.--51%
Tennessee River Pulp & Paper Co.
The Corinth & Counce Railroad Co.
Superior Box and Bag Co., Inc.
J. I. CASE CO.--91%
Domestic--
Case Power and Equipment Ltd.
Davis Manufacturing, Inc.
Droit Manufacturing Corp.
J. I. Case Credit Corp.
Foreign--
Compagnie des Tracteurs
J. I. Case (Australia) Pty., Ltd.
J. I. Case do Brasil
Comercio e Industria Ltda.
J. I. Case Company Ltd.
J. I. Case (Denmark) A/S
J. I. Case Deutschland Gmbh.
J. I. Case (Hong Kong) Ltd.
J. I. Case (Japan) K. K.
J. I. Case (Murray Bridge) Pty., Ltd.
J. I. Case (Sweden) A/B
WALKER MFG. DIVISION
Galt Metal Industries, Ltd.
Motor-Condensator
Compagnie Schloz K. G. (Germany)
The Mechanex Corp.
Walker Manufacturing Co.
NEWPORT NEWS SHIPBUILDING AND DRY DOCK CO.
Nuclear Service and Construction Co., Inc.

Desarrollo Industrial, S. A.
Houston National Bank
Tennessee Gas Building Corp.
Ten Ten Travis Corp.
Houston Testing Corp.--85%
Moorgate Corp.
Philadelphia Life Insurance Co.--24%
San Francisco Life Insurance Co.
Tennessee Life Insurance Co.
Qualitron Aero, Inc.
Foreign--
Tenneco International, N. V.
Tennessee Argentina, S. A.

Tenneco Inc. Sells Calif. County Farms

HOUSTON, Dec. 22 (AP) — Teneco Inc. disclosed today a $15-million sale of 30,000 acres of agricultural properties in Kern County, Calif.

The purchaser of the raw crop, developed and undeveloped properties in Kern County is Roberts Farms Inc. of McFarland, Calif.

Hollis Roberts, president of the purchasing firm, indicated the developed acreage would continue to be devoted to agricultural programs. Heggblade-Marguleas-Tenneco, the Tenneco agricultural subsidiary at Bakersfield, Calif., will continue to provide the marketing service.

N.W. Freeman, Tenneco chairman and president, said the sale is part of a policy to buy, develop, and sell land on a regular basis.

Tenneco has a number of packing and processing plants, including a new $6.3 million facility at Bakersfield.

The Houston-based firm has diversified interests ranging from oil and gas to automotive parts.

THE WASHINGTON POST
December 23, 1971

THRIFTIMART, INC.

1837 South Vermont Avenue, Los Angeles, California 90006

Financial Profile

Market Value:	$35,717,203
Revenues:	$283,912,035
Assets:	$65,151,246
Net Profits:	$ 3,433,676

Chief Executive: Robert E. Laverty
Total Remuneration: $77,281.81
No. of Shares Owned/Controlled By: 14.9% common stock and 10.48% preferred

Physical Profile

No. of employees:	3965
Supermarkets:	73
Liquor-deli stores	5

Current property assets:
Jersey Maid Milk Products (26.83% owner)
312,000 shares in Blue Chip Stamps valued on March 28, 1971 at $5,600,000.
Real properties being held for sale with an estimated market value of $3,500,000.
Smart and Final Iris Co. Wholesale Grocers
Bi-Rite
Smart and Final Iris Co.

TIMES MIRROR COMPANY

Times Mirror Square, Los Angeles, California 90053

Financial Profile

Market Value:	(234)	$583,628,000
Revenues:	(345)	$481,845,000
Assets:		$402,181,000
Net Profit:	(282)	$ 30,147,000

Chief Executive: Franklin D. Murphy
Total Remuneration: $150,240
No. of Shares Owned/Controlled By: 1500

Physical Profile

No. of Employees: 14,384

Times Mirror subsidiaries - see following page

Company also owns significant amounts of stock in the Tejon Ranch

Interconnecting Directorates

Bankamerica Corp.; Bank of America N.T. & S.A. (2); Dillingham Corp.; Bank of California, N.A.; Unionamerica Corp. (3); Western Air Lines; Pacific Lighting Corp.; Security Pacific National Bank; Santa Fe Industries; Republic National Bank of Dallas; American Airlines; North American Rockwell Corp.; Chandis Securities Co.; Pan American; Gibson, Dunn & Crutcher; Signal Companies; Northrup Corp; Wells Fargo Co.; TRW Inc.; Hallmark Cards Inc.; Ford Motor Co.; Samuel H. Kress Foundatio among others.

NEWSPAPER PUBLISHING

LOS ANGELES TIMES. The Los Angeles Times is the nation's largest standard-sized metropolitan newspaper with more than one million daily circulation. It has been the nation's leader in advertising volume for 16 consecutive years and has published over 100 million lines of advertising for the past six. It has also led the nation in news and features for the past 17 years.

NEWSDAY. Newsday is the nation's largest suburban newspaper, with a daily circulation in excess of 455,000. A tabloid with a magazine-like format, it is published every afternoon except Sunday and circulates primarily in Nassau and Suffolk counties, Long Island, New York.

THE DALLAS TIMES HERALD. The Dallas Times Herald, published evenings and Sunday, has a circulation of 241,000 copies daily and 285,000 copies Sunday. The paper ranks seventh among the nation's evening newspapers in advertising.

ORANGE COAST DAILY PILOT. The Orange Coast Daily Pilot serves seven suburban communities along the coast of Southern California's Orange County. The weekday afternoon paper's circulation is more than 40,000 copies.

BOOK PUBLISHING

HARRY N. ABRAMS, INC. is the foremost publisher of art books, prints, and original graphics in the United States, with offices in New York, The Netherlands, and Tokyo.

MATTHEW BENDER & COMPANY, INC. publishes law books, interpretive legal treatises, and form books on specialized areas of law for attorneys and accountants. The firm has offices in New York, Albany, Washington, D.C., and San Francisco.

FULLER & DEES MARKETING GROUP, INC., Montgomery, Alabama, is a direct mail firm that publishes books for homemakers and home reference.

THE C. V. MOSBY COMPANY, St. Louis, publishes reference and text books and journals in the fields of medicine, dentistry, nursing and the biological sciences.

NEW AMERICAN LIBRARY, INC., New York, is one of the largest publishers of paperback books in the world, featuring Signet, Mentor, Signet Classics and Plume titles.

NEW ENGLISH LIBRARY, LTD., London, publishes paperback books and distributes books and magazines throughout the world.

THE SOUTHWESTERN COMPANY, located in Nashville, Tennessee, engages in direct, door-to-door marketing of religious and educational books.

THE WORLD PUBLISHING COMPANY, with offices in New York and Cleveland, is the nation's largest publisher of Bibles and the second largest publisher of dictionaries.

YEAR BOOK MEDICAL PUBLISHERS, INC., Chicago, is a leading publisher of year books in the fields of medicine and dentistry containing an annual review of international literature.

FOREST PRODUCTS

PUBLISHERS PAPER COMPANY has plants at Oregon City and Newberg, Oregon, that produce more than 40 grades of paper (primarily newsprint), and unbleached sulphite pulp (for use in paper production and for market sale). Lumber mills at Tillamook and Molalla, Oregon, manufacture kiln-dried fir and hemlock dimension lumber. In Portland the Dwyer division produces lumber, plywood, pre-fabricated home-building components and mulch for landscape and garden use. The company also owns 150,000 acres of timberlands.

PUBLISHERS FOREST PRODUCTS COMPANY OF WASHINGTON, Anacortes, Washington, produces plywood in a variety of sizes and a diversified line of panel products and hardboard. A newly acquired lumber mill at Everett, Washington, manufactures a variety of roof and floor decking for residential and commercial structures. The company owns 15,000 acres of timberlands.

PUBLISHERS FOREST PRODUCTS, Burney, California, operates a lumber mill and owns approximately 33,000 acres of timberlands in Northern California

OTHER OPERATIONS

BROADCASTING & CABLE TV

Television station KDFW-TV, the CBS Television Network affiliate of The Times Herald Printing Company, is the leading television station in total audience for the Dallas-Fort Worth area.

CABLE TELEVISION. The Times Mirror Company has three cable television subsidiaries – TM Communications Company, Costa Mesa, California; TM Communications Company of Florida, Tampa, Florida; and Long Island Cablevision, Riverhead, New York – with 16 operating systems serving communities in Southern California, central Florida, and eastern Long Island, New York.

MAGAZINE PUBLISHING

POPULAR SCIENCE PUBLISHING COMPANY, New York, publishes two specialty magazines *Popular Science Monthly* and *Outdoor Life*, and operates two related book clubs, Outdoor Life Book Club and Popular Science Book Club. *Popular Science Monthly*, a long established magazine for do-it-yourself enthusiasts, concentrates on new product development, evaluation and usage, and recreational and household needs. *Outdoor Life*, the world's leading magazine for outdoor sportsmen, is devoted to fishing, hunting and related outdoor activities.

COMMERCIAL PRINTING

TIMES MIRROR PRESS. Times Mirror's commercial printing division produces telephone directories for communities in Southern California, Phoenix, Denver, Las Vegas and Hawaii. TMP also prints sales promotion catalogs, department store mailers, annual reports, election ballots, travel maps and law books.

CHARTS, MAPS & INSTRUMENTS

THE DENOYER-GEPPERT COMPANY, Chicago, a leading producer of maps, charts, globes and other educational products, is best known in the fields of geography and history, and is also a large producer of science study aids. The company's audio-visual division, *Denoyer-Geppert Audio-Visuals*, produces educational slide systems for classroom and other use.

THE H. M. GOUSHA COMPANY, San Jose, California, specializes in publication of maps, charts, guides, directories, and other travel-oriented publications. Through its *Chek-Chart Division*, Gousha also provides lubrication guides, charts, and a variety of other information to automobile service stations in the U.S., Canada and Australia.

JEPPESEN & COMPANY of Denver is the world's leading private publisher of aeronautical information for commercial airlines and private and business pilots. Its aeronautical charts and diagrams are used by most world airlines and other pilots. *SANDERSON FILMS, INC.*, Denver, produces audio-visual aviation ground school training systems.

PICKETT INDUSTRIES, with headquarters in Santa Barbara, California, designs, manufactures, and distributes metal and plastic slide rules, templates, scales and related items for scientists, engineers, technicians, and students.

PLAN HOLD CORPORATION, Torrance, California, is the world's leading manufacturer of vertical, roll and lateral plan filing equipment used by the technical graphics industry

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TRANSAMERICA CORPORATION

701 Montgomery Street, San Francisco, California 94111

Financial Profile

Market Value:	(105)	$1,004,110,000
Revenues:	(96)	$1,483,916,000
Assets:	(50)	$3,723,237,000
Net Profit:	(195)	$ 42,645,000

Chief Executive: J.R. Beckett
Total Remuneration: $165,000
Value of Shares Owned/Controlled By: $676,000

Revenue Sources - see following page

Physical Profile

No. of employees: 24,000

Major Transamerica subsidiaries and services - see following page

Acquired Lyon Van and Storage Company on June 18, 1971.

Operation Notes

Occidental Life Insurance (a subsidiary) owns stock in the following corporations:

Carnation	16,365	Norton Simon	39,170	Bankamerica	25
Dow Chemical	3,600	Sears Roebuck	28,000	Security-Pac	40
General Foods	16,000	Standard Oil	30,000	Wells Fargo	10
Lucky Stores	30,900	Times Mirror	30,000	S.C. Edison	55

American Telephone and Telegraph 20,000

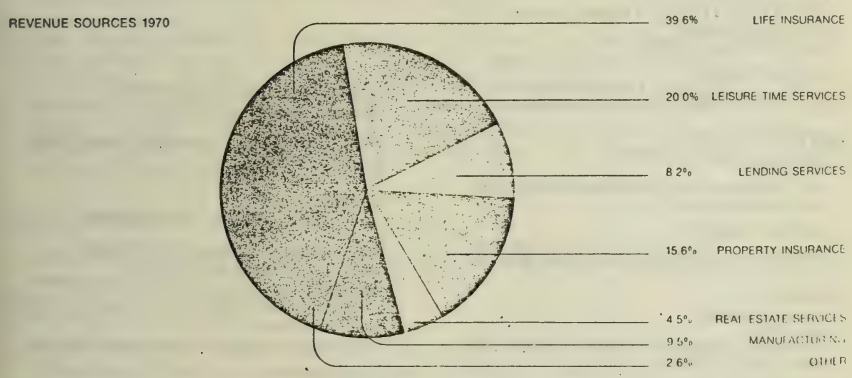
Interconnecting Directorates

Bank of America N.T. & S.A., New York; Colmery,Davis,Bennett, Leonard and McClure (law); Del Monte Corp.; States Steamship Co.; Knob Hill Mines Co.; McMicking & Co.; Wells Fargo Co.; University of the Pacific, among others.

Major Transamerica Subsidiaries and Services

INSURANCE SERVICES
FIANCIAL SERVICES
  Transamerica Financial Corp.
  Transamerica Financial Corp. of Canada
  Pacific Finance Loans
  Transamerica Commercial Corp.
  Transamerica Credit Corp.
  Transamerica Car Leasing
  Transamerica Fund Management Co.
  Transamerica Fund Sales
LEISURE TIME SERVICES
EDUCATIONAL SERVICES
MANUFACTURING

REAL ESTATE SERVICES
  Transamerica Title Insurance Co.
  Transamerica Real Estate Tax Service
  Transamerica Relocation Service
  Bankers Mortgage Co. of Calif.
  Transamerica Mortgage Advisors
  Transamerica Development Co.
  Transamerica Homes Co.
  Mobile Housing Environments
  Trans-Land Co.
BUSINESS SERVICES



UNIONAMERICA

Box3100 Terminal Annex, Los Angeles, California 90054

Financial Profile

Market Value:		$210,987,000
Revenues:		$185,915,000
Assets:	(81)	$2,677,618,000
Net Profit:	(446)	$ 17,139,000

Chief Executive: H.J. Volk
Total Remuneration: $147,000
Value of Shares Owned/Controlled By: $1,530,000

Physical Profile

No. of employees: 4000
Offices: 28

Loan Portfolio compensation:
Commercial 74.2%
Real Estate 15.9%
Consumer 9.9%
Other real estate owned - $5,529,00

COMMERCIAL BANKING
UNION BANK
Administrative Headquarters:
Fifth and Figueroa Streets, Los Angeles, California 90017
Harry J. Volk, Chairman
George A. Thatcher, President

Subsidiary Companies:
UNION INTERNATIONAL BANK, Los Angeles, California
UNIONAMERICA CAPITAL CORPORATION, Los Angeles, California

MORTGAGE BANKING
WESTERN MORTGAGE CORPORATION
Head Office:
2700 Wilshire Boulevard, Los Angeles, California 90005
Ott Thompson II, President

Subsidiary Companies:
UNIONAMERICA ADVISORS, INC., Los Angeles, California
WMC DEVELOPMENT COMPANY, Los Angeles, California

INSURANCE
SWETT & CRAWFORD
Home Office:
4201 Wilshire Boulevard, Los Angeles, California 90010
John C. Spencer, President

Subsidiary Companies:
HARBOR INSURANCE COMPANY, Los Angeles, California
BUFFALO INSURANCE COMPANY, New York, New York
LESLIE H. COOK, INC., Chicago, Illinois

APPRAISAL AND VALUATION SERVICES
MARSHALL AND STEVENS INCORPORATED
Corporate Office:
1645 Beverly Boulevard, Los Angeles, California 90026
E. P. Marshall, Chairman
A. D. Shiach, President

Subsidiary Company:
COOPER APPRAISALS LIMITED, Toronto, Ontario

COMPUTER AND INFORMATION SCIENCES
UNIONAMERICA COMPUTER CORPORATION
1000 South Hope Street, Los Angeles, California 90015
Neil E. Kennedy, President

Subsidiary Company:
COMPUTER INPUT CORPORATION, Los Angeles, California

REAL ESTATE
UNION REALCO
445 South Figueroa Street, Los Angeles, California 90017
J. Edward Gibbons, President

Interconnecting Directorates

Union Oil Company of California; Di Giorgio Corp.; Union Oil of Canada, Ltd.; Pacific Lighting Corp.; Times Mirror Corp. (3); Western Air Lines (2); Pacific Mutual Life Insurance Co.; Southern California Edison Co.; Pan American; TRW Corp.; Motion Pictures International Inc.; A.J. Bayer; May Department Stores Co.; Milliken, Kohlmeier, Clark, O'Hara (law); Metropolitan Theaters Corp.; American Cement Corp.; Host International Inc.; Young's Market Co.; Amfac, Inc., among others.

UNITED BRANDS COMPANY

245 Park Avenue, New York, N. Y. 10017

Financial Profile

Market Value:		$177,788,000
Revenues:	(108)	$1,395,704,000
Assets:	(258)	$1,090,017,000
Net Profit:		$ -2,091,000

Chief Executive: E. M. Black
Total Remuneration: $173,000
Value of Shares Owned/Controlled By: $4,420,000

Physical Profile

No. of Employees: 73,000

United Brands Co. (United Fruit Co. and John Morrell & Co.) subsidiaries --- see following page.

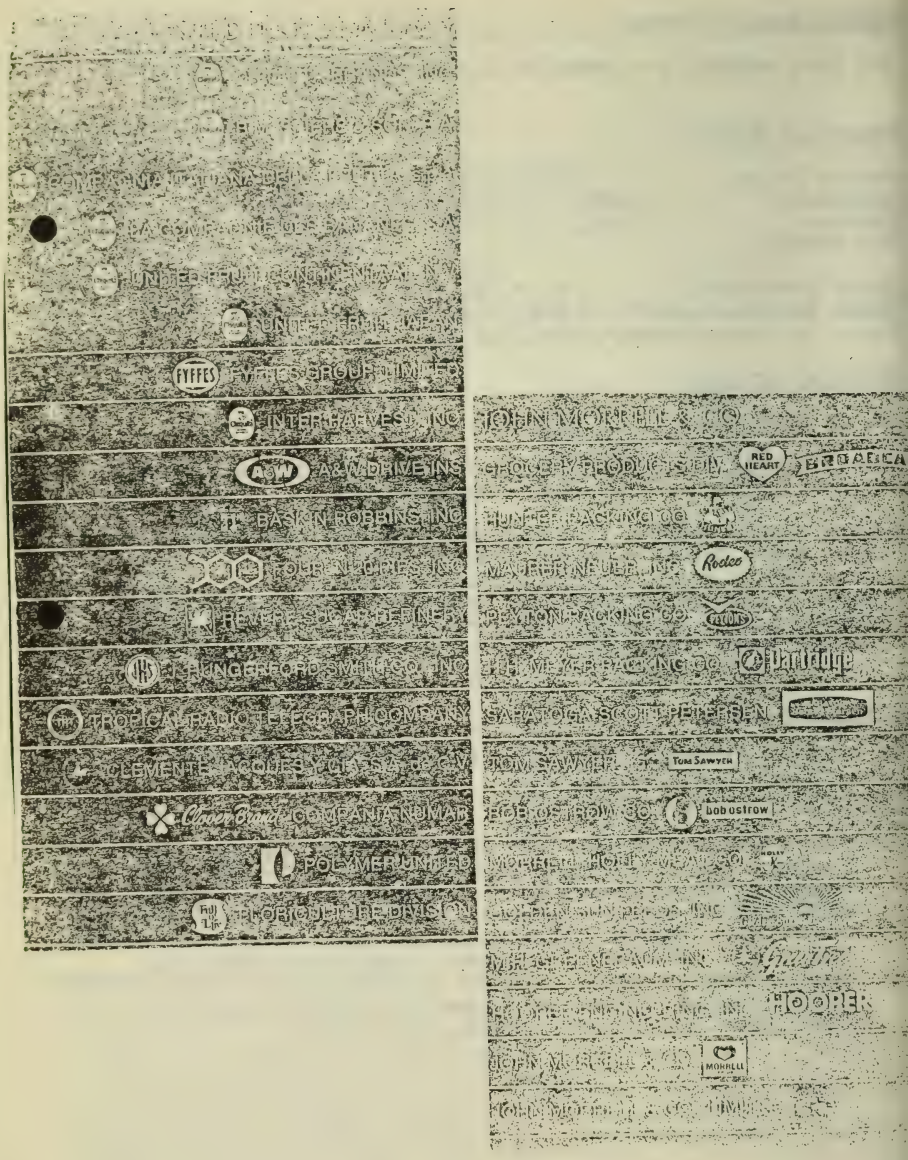
United Brands started InterHarvest by buying the Demco Farms and Earl Myers Co. in October, 1968. A month later it bought up Nunes Bros. of California, Inc. and Toro Farms. In 1969 Inter-Harvest acquired the certain assets of Peter A. Stollch Co., Inc.; Jerome Kantro Enterprise; Salinas Valley Vegetable Exchange; Consolidated Growers Inc., and the stock of the Monterey County Ice and Development Co.

Operation Notes

In 1970 Interharvest received a $23,311 ASCS subsidy.

Interconnecting Directorates

Missouri Pacific Railroad Co.; American Dual Vest Fund Inc.; Sherwood Corp.; American Research and Development Corp.; George D. Ruper Corp.; Welsh Grape Juice; General Corp. of Ohio; Paine, Webber, Jackson & Curtis (investment bankers); John Hancock Mutual Life; First National Boston Corp; S.D. Lunt & Co. (investment banking); John Price Jones Co.; Robert Johnston Corp.; Goodwin Proctor & Hoat (law), Condec Corp.; Bangor Punta Corp.; Lone Star Industries; Wells Television Inc., among others.


FYFFES
INTER HARVEST, INC.
A&W
BASKIN ROBBINS, INC.
FOUR N 20 PIES, INC.
REVERE SUGAR REFINERY
TROPICAL RADIO TELEGRAPH COMPANY
CLEMENTE JACQUES Y CIA. S.A. DE C.V.
Clover Brand
POLYMER UNITED
JOHN MORRELL & CO.
RED HEART
Rodeo
Partridge
TOM SAWYER
Lobostrow
HOOPER
MORRELL

WELLS FARGO AND COMPANY

P.O. Box 3435, San Francisco, California 94120

Financial Profile

Market Value:	(342)	$ 388,056,000
Revenues:	(392)	$ 411,651,000
Assets:	(30)	$6,225,566,000
Net Profit:	(257)	$ 32,731,000

Chief Executive: Richard P. Cooley
Total Remuneration: $177,000
Value of Shares Owned/Controlled By: $86,000

Physical Profile

No. of Employees: 11,000

Subsidiaries:

Wells Fargo Investment Fund (45% owner)
investments in 19 counties totaling nearly $6.5 million
capital base - $7.2 million
average investment - $345,000

Wellsco Data Corp. (wholly-owned)
provides systems, programming and computer service

Wells Fargo Securities Clearance Corp.
New York-based it handles stock and bond clearing transactions for bank and a limited number of outside customers.

Wellsco Real Estate Management Corp.
advisor to a real estate investment trust organized by Wells Fargo.

Interconnecting Directorates

Castle & Cooke Inc. (3); Hewlett Packard Co. (2); Del Monte Corp. (2); Safeway Stores Inc. (2); Utah Construction and Mining Co. (3); Owens-Illinois Inc.; Stanford Research Institute; Consolidated Foods; Heller, Ehrman, White and McAuliffe (law); FMC Corp.; Pacific Gas & Electric Co. (2); Georgia Pacific Corp.; Litton Industries Inc.; Mutual of New York; Pacific Lighting Corp.; PPG Industries; Pacific Mutual Life Insurance Co. (2); Mailliard & Schmiedell; Northrup Corp.; Times-Mirror Corp.; Industrial Indemnity Co.; John Breuner Co.; Thelen, Marrin, Johnson & Bridges (law); Transamerica Corp.; Firestone Tire and Rubber Corp.; Flood Estate; Caterpillar Tractor Co.; Bath Industries; Frank B. Hall & Co.; Stanford University (business administration and trustee)(2); Levi Strauss & Co.; Ford Motor Co.; Cabot Corp.; Rice Growers Association of California; Ampex Corp.; Brobeck, Phleger and Harrison (law); Hawaiian Airlines; Hawaiian Trust Co., Ltd.; Pacific Lumber Co.; Pope & Talbot Inc.; Watkins & Johnson Co.; General Electric (2); University of the Pacific; University of San Francisco; Pima Mining Co.; First Security Corp.; Chyrsler Corp.; Western Pacific Railroad Co.; Yosemite Park & Curry Co., among others.

WESTERN BANCORPORATION

P.O. Box 54068, Los Angeles, California 90054

Financial Profile

Market Value:	(127)	$ 860,776,000
Revenues:	(227)	$ 760,987,000
Assets:	(10)	$ 11,409,817,000
Net Profit:	(149)	$ 54,222,000

Chief Executive: F.L. King
Total Remuneration: $120,000
Value of Shares Owned/Controlled By: $575,000

Physical Profile

No. of employees: 23,000
Banking offices: 654

Western Bancorporation Affiliated Banks

	Total Assets March 31, 1971
ARIZONA	
First National Bank of Arizona	$1,108,599,935
Southern Arizona Bank and Trust Company	298,296,926
CALIFORNIA	
United California Bank	5,307,546,953
COLORADO	
The American National Bank of Denver	140,984,383
Continental National Bank	41,469,003
The First National Bank in Fort Collins	69,871,531
IDAHO	
Bank of Idaho	175,768,225
MONTANA	
Bank of Glacier County	11,794,453
The Conrad National Bank of Kalispell	37,257,396
Montana Bank	41,661,228
NEVADA	
Bank of Nevada	164,237,8
First National Bank of Nevada	677,319,6
NEW MEXICO	
Bank of New Mexico	110,692,4
First State Bank at Gallup	24,630,6
New Mexico Bank and Trust Company	44,763,6
Roswell State Bank	21,403,7
Santa Fe National Bank	37,380,5
OREGON	
First National Bank of Oregon	1,934,011,9
UTAH	
Walker Bank & Trust Company	320,472,8
WASHINGTON	
Pacific National Bank of Washington	778,284,7
WYOMING	
First National Bank of Casper	81,881,3
The First National Bank of Laramie	37,338,3
The First National Bank of Riverton	21,013,1

Interconnecting Directorates

Del Monte Corp.; Broadway Hale Stores Inc. (3); American Telephone and Telegraph Co.; Pacific Mutual Life Insurance Co. (6); Litton Industries, Inc.; Joshua Hendy International Corp. (steamship operators); International Telephone & Telegraph Co.; Standard Oil of California (2); Southern Pacific Co. (2); Cyprus Mines Corp.; Southern California Edison Co. (3); Boeing Airplane Co.; Berger, Briggs & Co.; Mutual of New York; Newmont Mining Corp.; Pacific Gas & Electric Co.; Pacific Telephone & Telegraph Co.; Skaggs Drug Centers; Willamette Industries; Foremost-McKesson Inc.; Newhall Land and Farming Co., among others.

WESTGATE - CALIFORNIA CORPORATION

Suite 900, United States National Bank Building, 1010 Second Avenue, San Diego, California 92101

Financial Profile

Market Value:	$32,982,000
Revenues:	$141,642,000
Assets:	$214,776,000
Net Profit:	$ 2,841,000

Chief Executive: C. Arnholt Smith
Total Remuneration: Not Available
No. of Shares Owned/Controlled By: 2932 Class A Common Stock and 1,600,000 Class B Common Stock

Physical Profile

No. of employees: 5000
Subsidiaries: 42

Air California (81% owned)
- intra-state carrier

Golconda Corp. (20% costing $7.8 million)
- stainless steel food service equipment and liquefied gas regulation
- owns 2500 acres of undeveloped mineral properties in Idaho
- owns 700,000 shares of Hecla Mining Co. - largest U.S. producer of silver

Yellow Cab Co.
- L.A., S.F., Oakland, Berkeley, Alameda, San Jose, Daly City, Beverly Hills, Burbank, El Segundo and Palm Springs.

AirporTransit
- airport bus service in L.A., Oakland, San Jose.

Westgate Caribe, Inc.
- $9,000,000 tuna cannery at Ponce, Puerto Rico
- other canneries at San Diego and Terminal Island, L.A. and a new one under construction in Hammond, Oregon.

Pet Food (Mini-Bits)
- ocean fish, salmon flavor and seafood dinner

Southland Produce Co.
- grows, processes and distributes food and produce

Westgate California Insurance Co.

Westgate Plaza Hotel in San Diego

Westgate-California Realty Co.
- in a joint venture are building a $50 million, 78 acre shopping center

Sold a large cattle ranch to Roberts Farms Inc. - for details see following page.

NOTE 4 — Sale of cattle ranch:

Just prior to December 31, 1969 a Westgate subsidiary owned a cattle ranch of approximately 12,000 acres in Kern, Kings and Tulare Counties in California which it had acquired over more than an eight year period. As of December 31, 1969, such subsidiary sold 1,040 acres of the ranch for $1,560,000 to a corporation controlled by Mr. M. J. Coen (see Note 2), resulting in a gain of $1,039,000. During 1970 such Westgate subsidiary sold 2,140 acres of the ranch to Kernville Brokerage Co., a newly created corporation controlled by Mr. M. J. Coen. The sales price was $3,210,000 (received in full at the time of sale) on which the Westgate subsidiary recorded a gain of $2,079,000.

In December 1970, such Westgate subsidiary transferred for a purchase price of $12,542,000 the remainder of the ranch, the improvements thereon, and the related cattle, machinery and equipment to three newly organized Westgate subsidiaries, Kingsburg Oil Co., Strathmore Cattle Co., and Woodlake Farms. To finance such purchase, the three newly organized subsidiaries borrowed from the United States National Bank an aggregate of $9,125,000 and received capital contributions from Westgate. As of December 31, 1970, Westgate sold all the capital stock of the three newly-organized subsidiaries for $3,195,000 to a corporation (owned by an independent real estate sales agent, who is also sales agent for Westgate's San Luis Rey properties, and his wife) which made the acquisition for the purpose of syndicating the properties through a public sale of limited partnership interests. The purchaser borrowed the $3,195,000 from the United States National Bank. As a result of these sale transactions, Westgate recorded a gain of $5,405,000.

In October 1970 an appraisal of the entire ranch (12,000 acres), obtained by the purchaser from a qualified independent appraiser in contemplation of the transaction consummated as of December 31, 1970 as set forth above, valued the ranch (including related cattle valued at $1,700,000 and machinery and equipment) at $14,500,000. In April 1971 an appraisal, obtained by Westgate's independent public accountants from a qualified independent appraiser, The American Appraisal Company, Inc., of such ranch, cattle and machinery and equipment, indicated a value on a cash sale of $8,000,000, which amount was less than the amounts at which these assets had been carried in the consolidated accounts of Westgate and its subsidiaries. Because of this appraisal and the participation in the transaction of United States National Bank, the independent public accountants were of the opinion that gain could not then be properly recorded on the above-mentioned sales. In May 1971 another appraisal obtain the purchaser from a qualified independent ap valued the ranch (including related cattl machinery and equipment) in excess of $19,5 Thereupon, Roberts Farms, Inc., owned by Mr. B. Roberts and family, purchased for cash w recourse at their outstanding principal amou accrued interest the above obligations of $9,1 and $3,195,000 to United States National Ba a consequence, any possible contingent liab Westgate if the borrowings from the Bank h ceeded the fair market value of the collater eliminated thereby permitting recognition of th on the above-mentioned sales. Mr. Roberts through Roberts Farms, Inc. or other comp owns or operates over 60,000 agricultural acre prised of a variety of farm products including orchards, nut groves, cotton and grain an serves as contract manager for other owners o orchards and groves in Kern, Kings, Tular certain other counties in California, is and wa ing 1970 the contract manager of the mentioned cattle ranch and is the proposed g partner of a limited partnership being form the purchaser which plans public syndication ranch in 1971.

The above-mentioned sales of ranch pro or corporations owning ranch properties were at prices fixed as the result of arms-length n tions between the buyers and sellers, and purchasers and their affiliates and Mr. Robe independent third parties and not affiliate Westgate or any of its subsidiaries or affiliates are no arrangements or understandings wh between Westgate or any of its subsidiar affiliates and such purchasers or their affili Mr. Roberts with respect to, and neither We nor any of its subsidiaries or affiliates ha interest or obligation, contingent or other, in respect to, the ownership, operation, develo or disposition of all or any part of the ranch p or any expense, loss or profit relative thereto

3137

AGRICULTURAL ECONOMIC REPORT NO. 156

CORPORATIONS HAVING AGRICULTURAL OPERATIONS

Preliminary Report II

ECONOMIC RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE

PREFACE

In November 1967, the Secretary of Agriculture directed the Economic Research Service to conduct a survey to determine the number, kinds, and general characteristics of corporations that were directly involved in the production of farm products. Concern had been expressed over the apparent increase in the number of nonfarm corporations reported to be buying land and initiating new farming enterprises. Few data were available by which to judge the importance of this trend or to evaluate the possible impact on market prices of farm products and on local business communities.

The first preliminary report, summarizing the results of this inventory type survey for 22 States was published in August 1968 (Agr. Econ. Rpt. 142). This report contains similar data for 25 additional States, (Northeast, Appalachian, Southeast, Delta States, and Southern Plains regions) together with the introduction and methodology sections that appeared in the first preliminary report. The introduction and methodology and certain other explanatory portions have been included in this report to avoid the necessity of interested readers having access to the first preliminary report. A final report summarizing the results for all 50 States will be issued later. A special mail survey, which is expected to provide more complete coverage than was obtained from the survey techniques used for the other States, is in progress in California. Survey results have been obtained for Alaska and Hawaii but are not included in this report.

The survey sought to identify every incorporated business that was directly engaged in the production of farm products and to obtain a few descriptive facts about each. Questionnaires were completed by the managers of county offices of the Agricultural Stabilization and Conservation Service. In addition to using records maintained in each ASCS office, the managers also received assistance from county officials and from local representatives of other State and Federal agencies. Without such assistance, a survey of this scope could not have been completed as quickly as it was. The cooperation and assistance of these many individuals is gratefully acknowledged.

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Washington, D.C. 20250 April 1969

SUMMARY

A total of 4,850 corporate county units operating about 13 million acres of land were found in the 25 States included in this report. Such units represented less than 1 percent of all commercial farms and 5 percent of the land in farms in these States. About one-third of the total number and two-thirds of the total acreage in corporate county units was in 2 States--Florida and Texas. In Florida, 9 percent of the total number of commercial farms and 31 percent of the land in farms were corporate. Several States in the Northeast also had a relatively high proportion of their commercial farms operated by corporations.

A "corporate county unit" includes all the agricultural operations of an incorporated business within a county. These may involve only one farm or several. Those corporations that had operations in more than one county or State were counted in each county. Hence, the number of corporate firms is somewhat less than the number of county units but the number of farms is larger. Because differences between the numbers of county units and corporate firms are slight, the two terms are used interchangeably in this report.

More than three-fourths of the corporations in the 25 States owned all the land they operated. Only 6 percent rented all the land and 16 percent owned part and rented part. The proportion of corporations that own all or part of the land they operate is substantially higher than for all commercial farms. The proportion of full ownership was highest (84 percent) for individually owned and controlled corporations. Among the regions covered by this report, rental of land by corporations was most common in the Southeast (excluding Florida), the Delta States, and the Southern Plains States.

Nearly two-thirds of the corporations in the 25 States were family corporations, 15 percent were individually owned or controlled, and 21 percent were other types of corporations. Forty-four percent had one or more business activities in addition to their agricultural operations. Typically, these activities involved the manufacture or sale of feed or fertilizer and processing or marketing of agricultural products. The combination of farming with local, nonfarm-related business interests was common, especially in the Appalachian region, Pennsylvania, and Alabama. The farming operations of these corporations were usually smaller than the average for all corporations.

Agricultural production was the most important business activity, in terms of gross sales, for 69 percent of the corporations in the 25 States. In the Delta States, this percentage was 77 percent, and in Florida, farming was the first ranked business activity for 80 percent of the corporations.

Total gross sales of farm products from all corporations in the 25 States were estimated at $930 million in 1967 or 6 percent of total farm cash receipts for these States. About one-third of the corporations had estimated gross sales of less than $40,000 and one-tenth had gross sales of $500,000 or more. Slightly over half of the corporations in the $500,000 or more category were classified as family corporations.

The major crops produced by corporations in the 25 States were soybeans, cotton, sugarcane, corn, hay, citrus, and "other fruits." The importance of these crops varied by regions. Sugarcane acreages were especially large in Florida and Louisiana.

There were more beef cattle reported on corporate farms than any other type of livestock in all regions except the Northeast, where milk cows were predominate. Large-scale poultry operations were found in most States, but were most frequent in the Appalachian and Southeast regions. Although cattle feeding operations were common, they were of relatively small size, except in Texas.

Nearly one-half of all corporations were reported to have started farming as a corporation prior to 1960 and 42 percent during 1960-66. Nine percent of all corporations first began farming as a corporation in 1967 or the first half of 1968.

CORPORATIONS HAVING AGRICULTURAL OPERATIONS: PRELIMINARY REPORT II

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INTRODUCTION

The use of the corporate form of business organization by firms engaged in the production of agricultural products is not a new phenomenon, but it is an alternative form that is currently receiving attention.1/ Historically, farms and ranches have been one of the few types of businesses that have continuted to be organized and operated mainly as sole proprietorships or partnerships. More than 90 percent of all farm businesses are of this type even now. In the past, capital requirements for entry were typically lower than for many other types of businesses, and the transfer of ownership from one generation to the next did not pose serious problems. The assets accumulated during the lifetime of each owner could be passed by inheritance and gift without serious depletion from State and Federal taxes.

The mounting stream of new production technology, together with highly organized and increasingly complex farm supply and marketing systems, has in some cases created pressures for modifying the organizational form of the farm business. Capital requirements for entry into the production of some types of crops and livestock on a scale sufficiently large to utilize available production technology and to gain access to markets often exceed the amount one person can supply. Inheritance and gift taxes often claim a significant percentage of the total assets of the larger farm businesses, some of which have been built up over several generations. Incorporation of such farms offers more flexibility in planning for continuity of the business between generations and for softening the impact of such taxes.

The term "corporation farming" needs to be examined and understood more clearly. It can mean any business that has been incorporated under the laws of a particular State and produces one or more agricultural products. Incorporation creates a legal entity that is subject to a different set of rules

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1/ A special study of large-scale farms in 1930 showed that more than two-fifths of the large-scale truck and fruit farms and a fourth of the cash-grain farms were incorporated at that time. The study also found that incorporated farm businesses were more prevalent in the western third of the country than elsewhere, a situation that is still true. See Mumford, D. Curtis, Large-Scale Farming in the United States, Bur. Agr. Econ., U.S. Dept. Agr., 1939.

for conducting the business from those that apply to a sole proprietor or a partnership. The ownership of the assets of the business can be separated from management, the firm can obtain outside equity capital, a different set of tax laws apply, and provisions can be made for continuity of the business upon the death of the founder.

Although all incorporated businesses have certain common legal characteristics, they differ significantly in the ways they came into being and how they are operated. In many States, only one person is needed to incorporate a business, and he can operate it in much the same way as before incorporation. Other States require a minimum of three persons, a requirement that can be met by designating members of the same family as the incorporators. There may be only one major shareholder who continues to exercise dominant control and ownership. Management may be shared by several others who may or may not have significant investments.

The incorporated family farm business was the most common type of corporation found in the survey. Typically, such businesses are larger-than-average farms and ranches that have adopted the corporate form of business organization. The incorporation of family farm businesses has been facilitated by research and educational efforts of most State colleges and the U.S. Department of Agriculture.2/ An additional incentive was provided by special Federal tax legislation passed in 1958--Subchapter S--to extend most of the advantages of the general corporation to small businesses. According to data compiled by the Internal Revenue Service from tax returns, the number of farm tax returns filed under these provisions increased from less than 500 in 1958 to about 4,900 in 1965. This number represented more than one-fourth of all corporations classified as "farms" by the IRS.3/

There are additional family corporations that have been organized as general corporations, without the restrictions imposed by Subchapter S.4/ These may be either strictly family farm corporations, or family corporations having nonfarm business interests in addition to farming. Typically, these are local businesses engaged in the manufacture or sale of farm supplies, or in the processing or marketing of farm products or other local business.

2/ Articles have been published in law journals which discuss the legal and tax aspects of incorporation of family farm business. Extension reports also have been issued by a number of States. One of the most recent and comprehensive publications of this type is The Farm Corporation, North Central Region Extension Pub. No. 11, Iowa State Univ., Nov. 1967.

3/ IRS data on corporate tax returns showed 18,526 farm corporations in 1965 with total assets of $5.7 billion and business receipts of $4.9 billion. Average business receipts per return were $263,000. Farms were first separated from the broader industrial classification of "agriculture, forestry, and fisheries" in 1963. In that year, 16,300 farm corporations were reported and in 1964, 17,600. Nearly half of the total increase in all farm corporations for these 3 years was accounted for by new Subchapter S corporations.

4/ The principal requirements are that only 1 class of stock may be issued and there be no more than 10 shareholders.

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This combination of direct production with one or more "agribusiness" functions has been called vertical integration or coordination. A considerable number of such corporations were found in the survey.

There do not appear to be any basic differences between the family farm corporation and the nonfarm family corporation. Both have a limited number of shareholders, the stock is closely held, and there is usually nominal separation of ownership and management. The agricultural operations of the nonfarm family corporation tend to be smaller in relation to their nonfarm businesses.

The third type of corporation, which is currently attracting more attention than the two types just described, is the larger, often publicly owned, corporation. Some of these have been engaged in farm production for many years. Others have more recently expanded into direct production to complement their agribusiness interests. Some of the newest entrants are firms that often have little or no previous experience in farming or in the farm supply or marketing fields but see business opportunities in producing farm products. The management of such firms tends to view farming as a vehicle for applying their business experience and for realizing an attractive return on equity capital. Also, they often seek to exploit the most advanced existing technology and perhaps develop new technology. Frequently, also, they are seeking cost savings in the purchase of farm supplies, or in producing one or more products to meet market requirements. Direct production costs need not be less than they would have to pay under production contracts if a market advantage can be gained with a more assured supply or a product of more uniform quality.

Despite the attention that a few such corporations have received as a result of entering field crop production, the survey indicates that they are involved much more extensively in specialized livestock production. Thus far, production of broilers, eggs, and turkeys had moved closest toward being a manufacturing process. Raw materials can be assembled at a plant site, specialized technical knowledge and automation can be applied to the feeding operations, and output can be sold through previously arranged market outlets

Much of the technology needed to produce beef and pork under environmentally controlled conditions is already available and has attracted a number of "outside" corporations which are willing to assume the risks involved. Many of them have not been in business long enough to determine if their costs are in line with expectations or if profits will prove to be comparable with those from nonfarm business opportunities.

Within the 25-State area covered by this report, the major type of outside corporation with substantial crop operations was found in areas having the potential for land clearing, drainage, and development. Such operations were found chiefly in the Atlantic Coastal Plain extending from North Carolina to and including Florida, and in the Delta portions of Arkansas, Mississippi, and Louisiana.

Outside capital has been attracted to these two areas in recent years because of the opportunity to acquire large contiguous tracts of land to which capital and technology could be applied with the expectation that the

developed land would appreciate. Soybeans has been the chief crop, partly because of acreage restrictions on cotton and other crops and partly because of the favorable yield and price expectations. Double cropping of soybeans and wheat has been possible in favorable growing seasons, yielding a net return comparable with substantially higher priced Corn Belt land.

THE USDA SURVEY OF CORPORATION FARMS

The basic approach used in developing a national inventory of corporations having farm or ranch operations was to consult key persons in each county having knowledge of local conditions. Reporting forms and detailed instructions were sent to each ASCS county-office manager. He was instructed to consult his records and to confer with other persons in the county, such as the registrar of deeds, the extension agent, local representatives of other Federal agencies, and the ASCS committeemen, in developing a list of all corporations directly engaged in farm production. Corporations owning land but not operating it directly were specifically excluded.

A limited number of basic facts were obtained for each corporation. When a corporation had more than one operating unit within a county, all separate operations were combined for that firm. Thus, the survey provided an inventory of "county units" of operations, rather than a count of separate farms or ranches, or of business firms. The actual number of corporations is somewhat less than the number of "county units" indicated, but the number of farms is greater.5/

Reports were received for 4,850 corporate county units in the 25 States.6/ About one-fourth of these (1,215) were in Florida.7/ Texas randed second in total number (455), followed by Arkansas (301) and Mississippi (294).8/ Although in most States only 1 or 2 percent of all commercial farms were corporations, the proportion was 9 percent in Florida and 3 or 4 percent in several States in the Northeast. For the 25 States, the proportion was about 1 percent (table 1).

Total land operated by the reported corporations amounted to about 13 million acres. However, Florida accounted for nearly 30 percent of this total, and Texas for another 34 percent. Corporations accounted for 31 percent of the total land in farms and ranches in Florida. In Oklahoma, where State laws place restrictions on corporations owning land in rural areas, the proportion was only 0.4 percent.

5/ Because only minor differences are involved, the term "corporations" is used interchangeably with "corporate county units" in this report.

6/ An additional eight grazing associations and 83 farms and ranches operated by institutions also were reported but have been excluded from the summary.

7/ Results for Florida are shown separately because of its dominance in the 4-State region.

8/ IRS data on tax returns of corporations classified as "agriculture, forestry and fisheries" indicate that probably less than half of all farm corporations in Texas were obtained in the survey. This underenumeration is believed to be greater for ranches than for field crop operations.

The classification of corporations as to type showed that 64 percent were family corporations and 21 percent were "other" or nonfamily corporations (table 2). The remaining 15 percent were classified as "individual" corporations, indicating that ownership and control rested chiefly in one person. Many States permit this type of one-man corporation, but it was not possible in the survey to distinguish clearly between such corporations and those having several "silent" or inactive shareholders who may have been members of the owner's family.

The variations among States in the proportions of these three types of corporations were not great. The highest proportions of "other" corporations were reported in Kentucky, South Carolina, and Pennsylvania and the lowest in Maine, New Hampshire, and Rhode Island.

In terms of land operated by corporations, "other" corporations accounted for 26 percent of the total acres, and family corporations for 63 percent (table 3). In several States, notably South Carolina, North Carolina, and Massachusetts, the average acreage operated by "other" corporations was appreciably larger than for family corporations (table 4). In the 25 States as a whole, the average acreage per corporate county unit was nearly 7 times the average of all commercial farms. The range extended from a high of 13 times the average acres of all commercial farms in North Carolina, to less than 5 times in most States in the Northeast.

Business Interests Other Than Farming

Over one-half (56 percent) of all corporations were reported to be engaged only in farming and ranching, 19 percent had one or more agribusiness interests besides farming, and 20 percent had other business activities not related to their agricultural operations (table 5). The combination of farming and agribusiness was more prevalent in the Northeast than in the other regions. Typically, these activities involved the manufacture or sale of feed or fertilizer, sale of farm machinery, and livestock processing or marketing.

The combination of nonfarm business interests with farming was only slightly more prevalent than the combination of agribusiness and farming. This was more pronounced in the Appalachian region, Pennsylvania, and Alabama, where about one-third of the corporations represented local business firms that were engaged mostly in wholesale or retail trade and also had a farming enterprise.

A comparison of the importance of farming in relation to other business activities showed that farming was secondary in terms of gross sales for more than one-third of all corporations (table 6). This tendency was most apparent in the Appalachian and Southeast regions (excluding Florida) and in the Northeast. The primary business of such firms tended to be wholly unrelated to farming.

Of those corporations engaged only in farming, 71 percent were found to be family corporations, compared with 61 percent for those having agribusiness or nonfarming business interests (table 7). About one-third of the agr business corporations were not family owned. Individually owned corporation

were more prevalent when farming was in combination with a nonfarm business than with an agribusiness or with farming only.

For the 25 States as a whole, the average acres operated by corporations combining both agribusiness and nonagribusiness interests with farming were substantially larger than those engaged only in farming (table 8). This was especially apparent in the Southeast and Delta States regions.

Gross Sales of Farm Products

Although precise estimates of gross sales of farm products produced by corporations could not be obtained in the survey, the acreages of crops and numbers of livestock reported for their farm and ranch enterprises provided a basis for estimates. Gross sales of 4,850 croporations were estimated at $930 million in 1967, or about 6 percent of the cash receipts from farm marketings by all farms in the 25 States in that year. About two-thirds of the total for all corporation farms came from family corporations and over one-fourth from "other" corporations.

At the regional level, gross sales by corporations in the Appalachian and Southern Plains were probably about 3 percent of total sales by all farms. In the Southeast, the proportion was about 10 percent, chiefly because of the large number and size of corporation farms in Florida.

A distribution of corporate farms by estimated gross sales showed that 22 percent had less than $20,000 in sales in 1967 (table 9). In the Appalachian region, more than one-third had gross sales of less than $20,000. Only 10 percent of the corporate farms had gross sales of $500,000 or more. Most of the largest operations involved eggs, broilers, sugarcane, rice, and cotton.

Firms having agribusiness interests tended to have higher gross farm sales than did the farming-only corporations (table 10). The farming operations by firms with agribusiness interests tended to be the largest in the Delta States where cotton ginning is often a part of large-scale cotton production.

Among the corporations that had county-unit sales of $100,000 or more (about 1,390 cases reported), the proportion of family corporations declined as size of operations increased. For the 25 States, 71 percent of the firms having sales of $100,000 to $200,000 were family corporations (table 11). For units having $200,000 to $500,000 in sales, 63 percent were family corporations, and for those with sales of $500,000 or more, 53 percent were. Nearly two-fifths of these largest operations were classified as "other" corporations. However, only 135 such operations were reported in the survey.

Crops and Livestock Produced

The major crops for which acreages were reported accounted for a total of 2.6 million acres in the 25 States (tables 12 and 13). Nearly 38 percent of this crop acreage was in the three Delta States and was largely devoted to soybeans, cotton, and sugarcane. These crops accounted for 80 percent,

and soybeans alone accounted for 53 percent, of the reported land in crops. In Florida, sugarcane and citrus accounted for 71 percent of the reported land in crops. Fruit, corn, and hay accounted for 84 percent of land in crops in the Northeast region. Fruit alone accounted for 52 percent of all crops on corporate farms in that region.

The crop with the largest average acreage was sugarcane, which averaged 2,641 acres in Florida and 1,125 acres in Louisiana (table 13). Acreages of potatoes and vegetables also were large in Florida. Soybeans in the Delta States averaged 1,054 acres per county unit, and cotton, 376 acres. Tobacco, a crop usually grown on small acreages, averaged 274 acres per county unit in the Northeast, chiefly the shade-grown wrapper type grown by cigar corporations. A few large blueberry and cranberry operations contributed to the relatively large average acreage of fruits in the Northeast region.

Although detailed comparisons have not been made, it appears that livestock operations on corporate farms were more prevalent than crops. This was especially true for the Southern Plains and the Northeast. The raising of beef cows was the most frequently reported livestock enterprise, followed by yearling cattle and milk cows. The number of beef cows ranged from an average of 105 head in the Northeast to 661 head in Florida. The average for the 25 States was 348 head (tables 14 and 15).

Milk cows were a frequently reported class of livestock. The average number per unit ranged from 131 in the Northeast to 854 in Florida.

Cattle feeding enterprises were frequently reported and also were substantially larger than for typical farmer-feeders in most regions. The average number ranged from 193 head in the Northeast to 7,381 head in the Southern Plains.

Although not as frequently reported, poultry enterprises were operated in large units in all regions. For commercial egg production, the number of laying hens ranged between 48,000 and 170,000 per county unit for the 5 regions. Broilers were mostly concentrated in the Delta, Southeast, and Northeast.

Approximate Year of Incorporation

The net annual rate of increase in incorporated farm and ranch businesses could not be estimated from the survey because no records were obtained for those firms that have gone out of business. Internal Revenue Service data suggest a net annual increase of from 5 to 7 percent for farm corporations, or about the same annual rate as for all incorporated business. The gross rate of increase is somewhat higher than the net rate because of dissolutions and conversions to sole proprietorships and partnerships each year. The survey indicated that 8 percent of the family corporations first began farming as corporations in 1967 and the first 6 months of 1968, compared with 11 percent of the "other" corporations (table 16). In the Southern Plains, Delta States, and the Southeast excluding Florida, the proportio of "other" corporations of recent entry into farming was 21, 16, and 16 percent respectively.

Taking all corporation farms in the 25 States, 49 percent began farming as a corporation before 1960 and 42 percent during 1960-66. The highest proportions of pre-1960 corporations was reported in the Northeast and Southeast. The highest proportions organized in the 1960-66 period were in the Southern Plains and Delta States.

Land Tenure of Agricultural Corporations

Most corporations tended to own all the land they farmed (table 17). For the 25 States as a whole, 78 percent owned all land they farmed, while only 6 percent rented all of the land farmed. The percentage of full owners was greatest (84 percent) for corporations that were owned and controlled by individuals. The percentage of corporations with full ownership of land was highest in Florida, where 87 percent of all corporations and 90 percent of the individually owned corporations owned all the land farmed.

There was no consistent pattern among regions, or by type of corporation, in the average acreages operated under various tenure arrangements (table 18). Much of this variation is associated with the kinds of crops or livestock enterprises involved. Deciduous fruits in the Northeast, and citrus in Florida, for example, are seldom grown on rented land, whereas livestock ranches in the Southern Plains and elsewhere usually contain both owned and rented land. Relatively little acreage is involved in specialized poultry operations and this is predominantly owned because of the substantial investment in buildings and equipment.

METHODOLOGY AND LIMITATIONS

Several alternative means of identifying agricultural corporations were considered and evaluated. The agricultural census of 1964 did not contain questions concerning the organizational form of the farms enumerated and hence could not be used. Examination of the articles of incorporation filed in each State would have provided a limited amount of data, but this approach was rejected because of several considerations: (1) Most States do not classify business concerns filing such records according to industry or business codes. Hence, large numbers of records would need to be searched to select those desired. (2) The stated purposes contained in articles of incorporation are often broadly worded, making it difficult to select those firms that would conform to a uniform definition of an agricultural business. (3) Firms that were originally incorporated for a specific purpose, other than farming, may have subsequently entered farming. The current nature of such businesses would not be apparent from the firm name or from amendments to the original articles of incorporation.

Area probability sample surveys were considered but were rejected because of the nonrandom geographical distribution of firms and the large sampling errors that would result. The opportunity to approach complete coverage by utilizing the records and the personal knowledge of ASCS personnel in every county appeared to be the best alternative within the limits of time and funds. A pretest of the initial schedule and instructions was conducted in 14 counties in 10 Midwestern States before the first phase of

the survey was undertaken. Personal interviews by research personnel were made in these counties to determine the accuracy and completeness of the reports submitted. The results of these tests indicated that ASCS offices could provide the data needed to meet the general objectives of the survey.

Only corporations directly engaged in the production of one or more agricultural commodities were to be reported. Corporations owning land but renting it to others under cash or share-rental arrangements were specifically excluded.9/ The term "agricultural operations" was broadly defined to include the production of all crops and livestock and livestock products, including feedlots and broiler, turkey, and hatchery operations. However, it was not always possible for ASCS personnel to clearly distinguish between the contract and the fully integrated production of such firms. This problem may have resulted in some errors in the reported numbers of broilers and laying hens and turkeys, and in the gross sales of the firms involved.

The only types of operations specifically excluded were commercial forestry operations, Christmas tree farms, hunting and fishing clubs, and farms and ranches operated strictly as recreational enterprises. Reports were submitted for grazing associations and for farms and ranches operated by religious organizations and other institutions because most are incorporated, but such operations have been excluded from the preliminary tabulations. There were 456 such cases obtained for 47 States.

The classification of corporations as to type (individual, family, and "other") was based on local knowledge and was done without access to the legal documents of incorporation. State laws vary as to the minimum number of persons required to form a corporation, ranging from only one in such States as Iowa, Minnesota, Wisconsin, and Missouri, to three in many other States. Thus, in many States, it is possible to form a corporation within a family of husband, wife, and one other member. Such corporations may appear to be individually owned to an outside observer, because only one member is identified with the firm. Thus, the distinction between individual and family corporations may be less meaningful than between family and "other" corporations with diversified ownership.

When a corporation operated more than one separate unit within a county all operations in that county were combined into a single report. A tabulation of the number of units within a county for the first 22 States showed that 87 percent of the corporations reported had only one operating unit. An additional 11 percent had two or three units and only 2 percent had four or more. Those firms having more than one unit had an average of 3.2 units. The reporting form also asked for the number of units operated by each corporation in other counties within a State and in other States. A few corporations having operations in more than one county or in two or more States were identified.

9/ Firms are classified as farms in the summary of tax returns compiled by Internal Revenue Service if they report sales of farm products received under share-rental arrangements.

This treatment of multiunit operations differed from the procedure followed by the 1964 agricultural census in which each unit was usually counted as a separate farm. Hence, the number of corporate county units cannot be compared precisely with the number of farms reported by the census. Data compiled by the Internal Revenue Service from corporate tax returns represent a consolidation of all the separate business activities of firms whose principal business activity is farming. The business receipts of such firms include those from nonfarm business activities as well as from one or more separate farming units. Conversely, many firms which have agricultural production that is of minor importance in relation to their major business are excluded from IRS data for farm corporations. This occurs chiefly for firms classified in such industries as mill feeds, grain mill products, and food processing and marketing. About one-third of the firms identified in the survey were judged to have other business activities that were more important, in terms of gross sales, than were their farming activities. Because of these differences in definitions, IRS data provide only a general indication as to the completeness or the accuracy of survey results.

Total acres operated and acreages of specific crops were generally available from county ASCS records. Numbers of livestock were necessarily approximations, as were the estimates of gross sales of farm products. However, a detailed computer edit program was used to compare the probable gross sales value of the crops and livestock reported with the class interval of estimated gross sales. There is some evidence, however, that specialized livestock operations were less completely reported than were those operations involving the major field crops. Because of these varying degrees of underreporting between crops and livestock, acreages and numbers should not be compared directly with the total number of corporations or with census or USDA crop and livestock statistics.

Although the survey design called for complete enumeration, some qualifying corporations were undoubtedly missed. However, there are no independently determined data available by which to measure the extent of underenumeration. Using IRS tax data and census data pertaining to manager farms as guides, it appears that probably less than half of the total number of corporations in Texas was obtained in the survey. The number obtained for Florida also appears to be less than might be anticipated. Survey returns also were substantially below IRS numbers in several Northeastern States, notably New York, Massachusetts, and New Jersey. However, many of the farm corporations filing tax returns in these States have headquarters in New York City and Boston, but their farms and ranches are in other States. About half of all corporate returns classified as agriculture, forestry, and fisheries filed in New York State in 1965 were received by the Brooklyn and Manhattan district office of IRS. Similar differences between the location of the headquarters of firms and their production facilities may be observed in the statistics for other States.

There are many aspects of incorporated farms and ranches that could not be explored by the survey techniques employed. Such questions as production efficiency of large-scale operations, their impact upon pricing and competition in local markets, and their possible tax shelter advantages require study and analysis. However, considering the almost complete lack of any data on corporations, even the limited information produced by the survey will provide a basis for such additional research.

Table 1.--Farms and acres operated by corporations having agricultural operations as percentages of commercial farms, 25 States, 1968

State and region	Commercial farms 1/		Corporations 2/		Corporations as percentage of commercial farms	
	Farms	Land in farms	Farms	Land in farms	Farms 2/	Land in farms
	Number	1,000 acres	Number	1,000 acres	-----Percent-----	
Maine	5,500	1,665	57	92	1	6
New Hampshire	1,727	465	14	6	1	1
Vermont	5,274	1,975	42	25	1	1
Massachusetts	3,825	567	120	68	3	12
Rhode Island	440	50	14	6	3	12
Connecticut	2,875	430	117	60	4	14
New York	38,000	9,675	271	174	1	2
New Jersey	5,673	814	101	47	2	6
Pennsylvania	41,500	7,499	228	115	1	2
Delaware	2,627	604	50	39	2	6
Maryland	11,413	2,560	164	137	1	5
Northeast	118,854	26,304	1,178	769	1	3
Virginia	31,000	7,882	258	331	1	4
West Virginia	4,800	1,750	52	42	1	2
North Carolina	80,708	10,328	223	383	3/	4
Kentucky	58,000	11,102	151	124	3/	1
Tennessee	44,847	9,220	65	94	3/	1
Appalachian	219,355	40,282	749	974	3/	2
South Carolina	21,000	5,700	88	150	3/	3
Georgia	39,000	13,000	220	387	1	3
Florida	13,487	12,500	1,215	3,864	9	31
Alabama	30,500	9,900	75	108	3/	1
Southeast	103,987	41,100	1,598	4,509	2	11
Mississippi	34,000	11,350	294	727	1	6
Arkansas	27,342	11,300	301	657	1	6
Louisiana	17,750	8,059	240	706	1	9
Delta States	79,092	30,709	835	2,090	1	7
Oklahoma	37,472	27,900	35	99	3/	3/
Texas	78,000	118,229	455	4,434	1	4
Southern Plains	115,472	146,129	490	4,533	3/	3
25 States	636,760	284,524	4,850	12,875	1	5

1/ All farms having gross sales of $2,500 or more. Estimates for 1968 projected from 1964 census of agriculture.

2/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location. Number of corporations not strictly comparable with census number of farms.

3/ Less than 0.5 percent.

Table 2.--Corporations: Number and distribution, by type, 25 States, 1968 1/

State and region	Type of corporation					Distribution by type 3/		
	Individual	Family	Other	Unclassified 2/	Total	Individual	Family	Other
	Number					Percent		
Maine	7	45	4	1	57	13	80	7
New Hampshire	1	12	1	--	14	7	86	7
Vermont	6	28	4	4	42	16	74	10
Massachusetts	11	94	10	5	120	10	81	9
Rhode Island	--	13	1	--	14	--	93	7
Connecticut	9	89	18	1	117	8	77	15
New York	39	177	42	13	271	15	69	16
New Jersey	7	78	11	5	101	7	81	12
Pennsylvania	22	136	54	16	228	10	64	26
Delaware	8	35	4	3	50	17	74	9
Maryland	23	87	34	20	164	16	60	24
Northeast	133	794	183	68	1,178	12	72	16
Virginia	38	159	43	18	258	16	66	18
West Virginia	8	31	9	4	52	17	64	19
North Carolina	32	143	44	4	223	15	65	20
Kentucky	25	69	47	10	151	18	49	33
Tennessee	17	29	8	11	65	31	54	15
Appalachian	120	431	151	47	749	17	61	22
South Carolina	8	57	23	--	88	9	65	26
Georgia	29	146	38	7	220	14	68	18
Florida	203	673	284	55	1,215	18	58	24
Alabama	16	41	17	1	75	22	55	23
Southeast	256	917	362	63	1,598	17	60	23
Mississippi	67	175	46	6	294	23	61	16
Arkansas	25	197	62	17	301	9	69	22
Louisiana	31	146	48	15	240	14	65	21
Delta States	123	518	156	38	835	15	65	20
Oklahoma	6	19	6	4	35	20	61	19
Texas	68	268	79	40	455	16	65	19
Southern Plains	74	287	85	44	490	17	64	19
25 States	706	2,947	937	260	4,850	15	64	21

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.
2/ Type of corporation was not reported.
3/ Excluding unclassified.

Table 3.--Corporations having agricultural operations: Acres operated and distribution by type, 25 States, 1968

State and region	Type of corporation					Distribution by type 2/		
	Individual	Family	Other	Unclassified 1/	Total	Individual	Family	Other
	1,000 acres					Percent		
Maine	2	85	3	2	92	2	94	4
New Hampshire	1	4	1	--	6	24	60	16
Vermont	2	18	2	3	25	11	81	8
Massachusetts	5	36	24	3	68	8	55	37
Rhode Island	--	5	1	--	6	--	91	9
Connecticut	8	35	16	1	60	13	60	27
New York	24	120	22	8	174	15	72	13
New Jersey	4	28	13	2	47	9	62	29
Pennsylvania	8	67	32	8	115	7	63	30
Delaware	4	29	4	2	39	11	78	11
Maryland	15	73	32	17	137	12	61	27
Northeast	73	500	150	46	769	10	69	21
Virginia	43	143	123	22	331	14	46	40
West Virginia	11	25	3	3	42	28	63	9
North Carolina	31	198	147	7	383	8	53	39
Kentucky	23	64	29	8	124	20	55	25
Tennessee	13	56	9	16	94	17	71	12
Appalachian	121	486	311	56	974	13	53	34
South Carolina	29	87	35	--	150	19	58	23
Georgia	37	262	76	12	387	10	70	20
Florida	238	2,257	1,194	175	3,864	7	61	32
Alabama	30	66	11	1	108	28	62	10
Southeast	334	2,672	1,316	188	4,509	8	62	30
Mississippi	121	434	157	15	727	17	61	22
Arkansas	58	440	122	37	657	9	71	20
Louisiana	149	351	162	44	706	23	53	24
Delta States	328	1,225	441	96	2,090	17	61	22
Oklahoma	18	47	22	12	99	20	54	26
Texas	431	2,783	830	390	4,434	11	69	20
Southern Plains	449	2,830	852	402	4,533	11	68	21
25 States	1,305	7,713	3,070	788	12,875	11	64	25

1/ Type of corporation was not determined. Acres per unit assumed to be same as for all corporations for which type was reported.
2/ Excluding unclassified.

Table 4.--Acres per farm: Commercial farms, and corporate farms by type, 25 States, 1968 1/

State and region	Commercial farms	Type of corporate farm			
		Individual	Family	Other	All types
	Average acres				
Maine	303	289	1,898	853	1,622
New Hampshire	269	1,456	308	1,000	450
Vermont	374	407	644	425	583
Massachusetts	148	455	387	2,419	557
Rhode Island	114	---	390	475	397
Connecticut	150	851	393	895	508
New York	255	627	676	518	644
New Jersey	143	547	362	1,198	473
Pennsylvania	181	348	492	598	504
Delaware	230	498	818	1,033	777
Maryland	224	636	842	955	835
Northeast	221	550	630	824	663
Virginia	254	1,131	897	2,851	1,253
West Virginia	365	1,361	798	382	836
North Carolina	128	960	1,383	3,345	1,676
Kentucky	191	917	922	625	822
Tennessee	205	776	1,925	1,165	1,447
Appalachian	184	1,006	1,124	2,066	1,207
South Carolina	271	3,666	1,521	1, 33	1,721
Georgia	333	1,278	1,792	2,012	1,759
Florida	927	1,174	3,354	4,202	3,185
Alabama	325	1,877	1,606	620	1,438
Southeast	395	1,308	2,913	3,635	2,815
Mississippi	334	1,811	2,479	3,402	2,470
Arkansas	413	2,337	2,233	1,966	2,186
Louisiana	454	4,811	2,403	3,376	2,937
Delta States	388	2,674	2,364	2,823	2,527
Oklahoma	745	2,985	2,496	3,723	2,877
Texas	1,516	6,340	10,385	10,509	9,744
Southern Plains	1,265	6,068	9,863	10,030	9,120
25 States	447	1,851	2,617	3,276	2,655

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location. Average acreages computed from unrounded data.

Table 5.--Distribution of corporations by extent of business interests, 25 States, 1968

State and region	Farming only	Farming plus: Agri-business 1/	Farming plus: Nonagri-business 2/	Farming plus: Combination 3/	Total
	Percent				
Maine	48	38	9	5	100
New Hampshire	62	15	15	8	100
Vermont	40	37	18	5	100
Massachusetts	71	15	11	3	100
Rhode Island	50	29	14	7	100
Connecticut	64	19	11	6	100
New York	49	22	24	5	100
New Jersey	61	23	11	5	100
Pennsylvania	37	23	34	6	100
Delaware	16	53	22	9	100
Maryland	61	16	21	2	100
Northeast	52	23	20	5	100
Virginia	59	12	25	4	100
West Virginia	68	7	23	2	100
North Carolina	29	29	32	10	100
Kentucky	33	16	49	2	100
Tennessee	25	34	31	10	100
Appalachian	43	20	31	6	100
South Carolina	48	28	16	8	100
Georgia	45	20	24	11	100
Florida	66	16	15	3	100
Alabama	40	22	35	3	100
Southeast	61	18	17	4	100
Mississippi	71	17	10	2	100
Arkansas	60	19	16	5	100
Louisiana	59	14	21	6	100
Delta States	63	17	16	4	100
Oklahoma	52	7	24	17	100
Texas	56	20	20	4	100
Southern Plains	55	20	20	5	100
25 States	56	19	20	5	100

1/ Farm supplies; marketing or processing of farm products.
2/ Business activities unrelated to production or marketing of farm products.
3/ Both agribusiness and nonagribusiness.

Table 6.--Distribution of corporations according to major and secondary business activities, 25 States, 1968 1/

State and region	Farming major activity			Farming secondary activity			Total
	Farming only	With other activity	Total	Farming ranked 2nd	Farming ranked 3rd or lower	Total	
	Percent						
Maine	48	17	65	29	6	35	100
New Hampshire	62	--	62	31	7	38	100
Vermont	40	9	49	51	--	51	100
Massachusetts	71	8	79	19	2	21	100
Rhode Island	50	29	79	21	--	21	100
Connecticut	64	12	76	19	5	24	100
New York	49	9	58	38	4	42	100
New Jersey	61	10	71	25	4	29	100
Pennsylvania	37	10	47	47	6	53	100
Delaware	16	--	16	68	16	84	100
Maryland	61	3	64	31	5	36	100
Northeast	52	9	61	34	5	39	100
Virginia	59	9	68	31	1	32	100
West Virginia	68	2	70	27	3	30	100
North Carolina	29	14	43	44	13	57	100
Kentucky	33	7	40	56	4	60	100
Tennessee	25	11	36	54	10	64	100
Appalachian	43	10	53	41	6	47	100
South Carolina	48	12	60	30	10	40	100
Georgia	45	13	58	35	7	42	100
Florida	66	10	76	23	1	24	100
Alabama	40	16	56	42	2	44	100
Southeast	61	10	71	25	4	29	100
Mississippi	71	7	78	20	2	22	100
Arkansas	60	16	76	20	4	24	100
Louisiana	59	16	75	22	3	25	100
Delta States	63	13	76	21	3	24	100
Oklahoma	52	17	69	21	10	31	100
Texas	56	8	64	30	6	36	100
Southern Plains	55	9	64	31	5	36	100
25 States	56	10	66	29	5	34	100

1/ Gross sales was used as a basis for relative rankings.

Table 7.--Distribution of corporations, by type of corporation and extent of business interests, selected regions, 1968

Region and type of corporation	Farming only	Farming plus: Agri-business 1/	Farming plus: Nonagri-business 2/	Farming plus: Combination 3/
	Percent			
Northeast				
Individual	9	12	21	13
Family	81	69	54	65
Other	10	19	25	22
Total	100	100	100	100
Appalachian				
Individual	13	12	25	15
Family	69	64	50	75
Other	18	24	25	10
Total	100	100	100	100
Southeast excluding Florida				
Individual	9	11	24	16
Family	70	63	59	68
Other	21	26	17	16
Total	100	100	100	100
Florida				
Individual	18	11	24	16
Family	64	52	59	68
Other	18	37	17	16
Total	100	100	100	100
Delta States				
Individual	5	10	19	14
Family	80	59	50	72
Other	15	31	31	14
Total	100	100	100	100
Southern Plains				
Individual	12	18	21	27
Family	72	59	53	60
Other	16	23	26	13
Total	100	100	100	100
25 States				
Individual	13	13	23	16
Family	71	61	52	63
Other	16	26	25	21
Total	100	100	100	100

1/ Farm supplies; marketing or processing of farm products.
2/ Business activities unrelated to production or marketing of farm products.
3/ Both agribusiness and nonagribusiness.

Table 8.--Acres operated per corporation by extent of business interests, 25 States, 1968 1/

State and region	Farming only	Farming plus		
		Agri-business 2/	Nonagri-business 3/	Combination 4/
	Average acres			
Maine	565	522	12,792	225
New Hampshire	439	255	763	300
Vermont	535	541	820	414
Massachusetts	601	288	636	257
Rhode Island	423	130	588	366
Connecticut	388	717	786	611
New York	687	597	494	1,274
New Jersey	530	419	374	451
Pennsylvania	439	669	422	738
Delaware	627	985	566	488
Maryland	969	807	580	573
Northeast	607	629	799	702
Virginia	1,082	1,392	1,519	1,892
West Virginia	605	304	1,419	3,556
North Carolina	1,272	1,349	2,316	2,036
Kentucky	760	571	970	780
Tennessee	832	1,278	2,166	1,292
Appalachian	1,018	1,211	1,651	1,878
South Carolina	1,349	1,197	4,090	1,120
Georgia	1,657	1,559	2,193	1,826
Florida	1,803	3,770	6,614	14,412
Alabama	1,907	1,173	885	3,199
Southeast	1,771	3,016	5,037	7,762
Mississippi	2,086	3,085	2,568	10,315
Arkansas	1,913	1,985	2,140	6,104
Louisiana	2,102	4,101	4,086	3,699
Delta States	2,032	2,926	3,020	5,864
Oklahoma	1,751	635	4,760	4,080
Texas	8,862	3,653	7,993	60,955
Southern Plains	8,432	3,579	7,723	48,981
25 States	2,075	2,084	3,152	8,383

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.
2/ Farm supplies; marketing or processing of farm products.
3/ Business activities unrelated to production or marketing of farm products.
4/ Both agribusiness and nonagribusiness.

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Table 9.--Distribution of corporations by gross sales of farm products, selected regions, 1967 1/

Gross sales of farm products	Northeast	Appalachian	Southeast 2/	Florida	Delta	Southern Plains	25 States
	Percent						
Less than $20,000..	17	35	23	26	11	29	22
$20,000-$39,999....	13	15	13	16	11	10	13
$40,000-$99,999....	28	21	22	20	24	28	24
$100,000-$199,999..	18	14	17	14	28	14	18
$200,000-$499,999..	14	8	14	13	17	9	13
$500,000 or more...	10	7	11	11	9	10	10
Total.....	100	100	100	100	100	100	100
Number reported....	909	623	345	1,009	726	363	3,975

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.

2/ Excluding Florida.

Table 10.--Distribution of corporations by gross sales of farm products according to extent of business interests, selected regions, 1967 1/

Region and gross sales of farm products	Farming only	Farming plus: Agri-business 2/	Farming plus: Nonagri-business 3/	Farming plus: Combination 4/
	Percent			
Northeast				
Less than $40,000	18	30	54	37
$40,000-$99,999	35	22	22	22
$100,000-$199,999	20	20	13	13
$200,000-$499,999	17	14	7	15
$500,000 or more	10	14	4	13
Total	100	100	100	100
Number reported	469	208	184	48
Appalachian				
Less than $40,000	43	36	69	40
$40,000-$99,999	26	21	14	22
$100,000-$199,999	19	13	8	15
$200,000-$499,999	8	15	4	10
$500,000 or more	4	15	5	13
Total	100	100	100	100
Number reported	263	124	196	40
Southeast excluding Florida				
Less than $40,000	28	28	59	29
$40,000-$99,999	25	13	25	23
$100,000-$199,999	20	17	6	32
$200,000-$499,999	19	17	5	13
$500,000 or more	8	25	5	3
Total	100	100	100	100
Number reported	150	76	88	31
Florida				
Less than $40,000	45	26	46	14
$40,000-$99,999	22	14	23	11
$100,000-$199,999	15	18	9	11
$200,000-$499,999	12	16	13	29
$500,000 or more	6	26	9	35
Total	100	100	100	100
Number reported	672	160	149	28

Table 10.--Distribution of corporations by gross sales of farm products according to extent of business interests, selected regions, 1967 1/ (Continued)

Region and gross sales of farm products	Farming only	Farming plus:		
		Agri-business 2/	Nonagri-business 3/	Combination 4/
	Percent			
Delta States				
Less than $40,000	17	18	48	15
$40,000-$99,999	28	15	23	6
$100,000-$199,999	34	18	18	15
$200,000-$499,999	18	22	6	21
$500,000 or more	3	27	5	43
Total	100	100	100	100
Number reported	457	125	111	33
Southern Plains				
Less than $40,000	36	25	57	29
$40,000-$99,999	37	27	20	6
$100,000-$199,999	14	17	9	18
$200,000-$499,999	7	13	9	--
$500,000 or more	6	18	5	47
Total	100	100	100	100
Number reported	192	77	77	17
25 States				
Less than $40,000	31	29	56	29
$40,000-$99,999	29	19	21	17
$100,000-$199,999	20	17	11	17
$200,000-$499,999	14	16	7	15
$500,000 or more	6	19	5	22
Total	100	100	100	100
Number reported	2,204	769	795	197

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.
2/ Farm supplies; marketing or processing of farm products.
3/ Business activities unrelated to production or marketing of farm products.
4/ Both agribusiness and nonagribusiness.

Table 11.--Distribution of corporations with gross sales of $100,000 or more according to type of corporation, selected regions, 1967 1/

Gross sales of farm products and type of corporation	Region							Corporations reported
	North-east	Appala-chian	South-east 2/	Florida	Delta	Southern Plains	25 States	
	Percent							Number
$100,000-$199,999								
Individual	10	18	10	11	12	6	10	61
Family	80	68	71	68	73	76	71	420
Other	10	14	19	21	15	18	19	110
Total	100	100	100	100	100	100	100	591
$200,000-$499,999								
Individual	7	16	14	13	11	10	10	46
Family	76	66	55	60	64	67	63	278
Other	17	18	31	27	25	23	27	118
Total	100	100	100	100	100	100	100	442
$500,000 or more								
Individual	5	7	14	9	14	18	9	34
Family	61	60	56	52	46	56	53	188
Other	34	33	30	39	40	26	38	135
Total	100	100	100	100	100	100	100	357

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.
2/ Excluding Florida.

Table 12.--Number of corporations reporting specified crops, by selected regions, 1967 1/

Crops	Northeast	Appalachian	Southeast 2/	Florida	Delta	Southern Plains	25 States
	Number						
Corn	415	362	186	66	96	25	1,150
Wheat	202	126	52	5	205	94	684
Other grain	221	156	99	11	65	187	739
Hay	453	314	153	65	156	115	1,256
Soybeans	71	134	102	7	479	16	809
Potatoes	88	11	---	25	5	2	131
Sugar beets	17	---	---	--	---	4	21
Sugar cane	---	---	---	61	90	---	151
Tobacco	32	220	48	20	---	---	320
Cotton	---	73	108	2	376	115	674
Rice	---	---	1	--	117	15	133
Peanuts	---	43	71	21	---	14	149
Cranberries	40	---	---	--	---	---	40
Apples	66	30	5	--	---	1	102
Peaches	30	14	26	6	1	2	79
Citrus	---	---	---	557	---	---	557
Fruits, others and not specified	66	13	32	26	28	8	173
Tomatoes	22	8	2	11	2	1	46
Vegetables, others and not specified	97	19	11	50	8	16	201
Green house and nursery	46	8	5	42	1	2	104

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location. Numbers shown should not be compared directly with the total number of corporations because of imcomplete reporting.
2/ Excluding Florida.

Table 13.--Average acreages of specific crops per corporation, selected regions, 1967 1/

Crops	Northeast	Appalachian	Southeast 2/	Florida	Delta	Southern Plains	25 States
	Acres						
Corn	177	171	252	316	100	556	197
Wheat	66	70	104	450	334	432	203
Other grains	80	81	188	176	295	498	221
Hay	152	122	157	167	201	248	161
Soybeans	219	296	270	561	1,054	210	735
Potatoes	297	355	---	1,140	94	360	456
Sugar beets	218	---	---	---	---	131	202
Sugar cane	---	---	---	2,641	1,125	---	1,738
Tobacco	274	16	23	68	---	---	46
Cotton	---	121	130	54	431	289	324
Rice	---	---	40	---	403	1,105	477
Peanuts	---	114	130	81	---	256	131
Cranberries	899	---	---	---	---	---	899
Apples	257	332	244	---	---	30	276
Peaches	147	131	353	169	120	100	212
Citrus	---	---	---	364	---	---	364
Fruits, other and not specified	1,244	258	152	389	414	237	659
Tomatoes	113	562	120	349	51	50	243
Vegetables, other and not specified	482	344	54	921	87	340	528
Green house and nursery	229	859	131	143	300	505	244
	1,000 acres						
Total acres of all crops reported	450	223	167	511	961	246	2,558

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.

2/ Excluding Florida.

Table 14.--Number of corporations reporting specified classes of livestock, selected regions, 1967 1/

Livestock	North-east	Appala-chian	South-east 2/	Florida	Delta	Southern Plains	25 States
	Number						
Cattle fed	91	130	65	28	55	59	428
Yearling cattle	164	135	95	87	106	78	665
Beef cows	85	254	166	233	265	182	1,185
Milk cows	295	88	35	81	18	14	531
Market hogs sold	31	63	39	8	20	17	178
Sows farrowed	9	49	38	9	15	12	132
Sheep	21	23	---	1	4	21	70
Horses	30	26	6	11	11	7	92
Broilers sold	39	15	15	1	22	2	94
Laying hens	85	46	60	18	34	14	257
Turkeys sold	5	19	6	--	4	9	43

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location. Numbers shown should not be compared directly with the total number of corporations because of incomplete reporting.
2/ Excluding Florida.

Table 15.--Average number of head of specified livestock per corporation, selected regions, 1967 1/

Livestock	North-east	Appala-chian	South-east 2/	Florida	Delta	Southern Plains	25 State total
	Head						
Cattle fed	193	257	1,329	1,524	673	7,381	1,525
Yearling cattle	66	192	136	254	201	403	187
Beef cows	105	178	280	661	310	415	348
Milk cows	131	148	158	854	188	187	249
Market hogs sold	312	758	1,003	601	1,128	3,093	992
Sows farrowed	68	78	87	37	70	599	124
Sheep	85	467	---	300	112	2,778	1,023
Horses	55	46	11	65	17	9	53
	1,000 head						
Broilers	653	1,261	1,899	2,000	1,973	6,020	1,386
Laying hens	75	48	90	107	170	137	92
Turkeys	14	226	108	---	90	256	124

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location.
2/ Excluding Florida.

Table 16.--Distribution of corporations by approximate year they began farming as a corporation, selected regions

Type of corporation and year	Northeast	Appalachian	Southeast 1/	Florida	Delta	Southern Plains	25 States
	Percent						
Individual							
Before 1960	53	51	55	56	36	34	49
1960-66	39	43	35	37	52	57	43
1967-68	8	6	10	7	12	9	8
Total	100	100	100	100	100	100	100
Family							
Before 1960	60	50	52	52	42	35	51
1960-66	35	40	42	41	46	53	41
1967-68	5	10	6	7	12	12	8
Total	100	100	100	100	100	100	100
Other							
Before 1960	46	44	45	47	47	28	44
1960-66	46	49	39	47	37	51	45
1967-68	8	7	16	6	16	21	11
Total	100	100	100	100	100	100	100
All corporations							
Before 1960	57	49	50	52	42	33	49
1960-66	37	42	41	41	45	53	42
1967-68	6	9	9	7	13	14	9
Total	100	100	100	100	100	100	100

1/ Excluding Florida.

Table 17.--Distribution of corporations, by tenure of land operated and by type, selected regions, 1968

Region and tenure	Type of corporation			
	Individual	Family	Other	All corporations
	Percent			
Northeast				
Owned only	80	75	77	76
Rented only	3	1	6	2
Part owned, part rented	17	24	17	22
Total	100	100	100	100
Appalachian				
Owned only	77	78	81	78
Rented only	6	3	5	4
Part owned, part rented	17	19	14	18
Total	100	100	100	100
Southeast 1/				
Owned only	92	77	83	80
Rented only	--	4	6	4
Part owned, part rented	8	19	11	16
Total	100	100	100	100
Florida				
Owned only	90	87	82	87
Rented only	5	5	10	6
Part owned, part rented	5	8	8	7
Total	100	100	100	100
Delta States				
Owned only	84	66	71	70
Rented only	6	10	9	9
Part owned, part rented	10	24	20	21
Total	100	100	100	100
Southern Plains				
Owned only	82	63	72	68
Rented only	7	14	15	13
Part owned, part rented	11	23	13	19
Total	100	100	100	100
25 State Total				
Owned only	84	76	78	78
Rented only	5	5	9	6
Part owned, part rented	11	19	13	16
Total	100	100	100	100

1/ Excluding Florida.

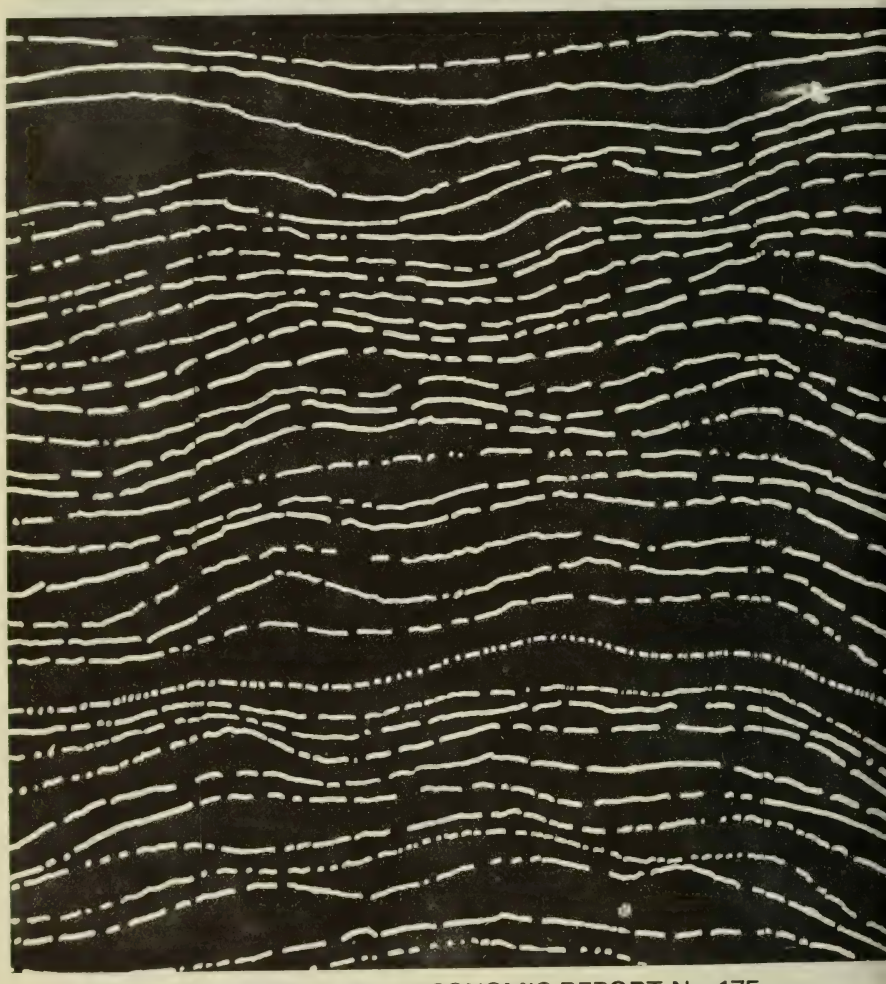
Table 18.--Average acres operated per corporation, by tenure of land operated and by type, selected regions, 1968 1/

Regions and tenure	Type of corporation			
	Individual	Family	Other	All corporations
	Acres			
Northeast				
Owned only	457	476	734	514
Rented only	660	1,035	1,585	1,217
Part owned, part rented	544	620	631	614
Appalachian				
Owned only	981	982	2,169	1,211
Rented only	1,700	1,005	2,293	1,477
Part owned, part rented	1,815	1,322	2,980	1,634
Southeast 2/				
Owned only	1,346	1,745	1,359	1,601
Rented only	---	722	536	660
Part owned, part rented	1,973	1,476	4,458	911
Florida				
Owned only	968	2,982	3,910	2,821
Rented only	447	1,774	845	1,210
Part owned, part rented	4,610	9,126	10,939	8,987
Delta States				
Owned only	2,700	2,351	2,065	2,351
Rented only	4,571	1,733	2,381	2,131
Part owned, part rented	1,760	1,476	5,095	2,183
Southern Plains				
Owned only	4,649	12,640	2,590	9,222
Rented only	4,554	5,256	36,464	11,699
Part owned, part rented	1,715	4,147	1,944	3,662
25 State Total				
Owned only	1,535	2,605	2,769	2,464
Rented only	2,228	2,458	6,648	3,652
Part owned, part rented	1,463	1,940	3,580	2,148

1/ County unit basis; i.e., corporations having operations in more than one county or State were counted at each such location. Average acreages computed from unrounded data.

2/ Excluding Florida.

OUR 31,000 LARGEST FARMS



AGRICULTURAL ECONOMIC REPORT No. 175
ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service
Farm Production Economics Division

E R R A T A

OUR 31,000 LARGEST FARMS, U.S. Dept. Agr., Agr. Econ. Rpt. No. 175, March 1970.

Page 14, table 8, unit column, opposite vegetables--
change line 23 to "Acres harvested" and
change line 24 to "Sales in dollars."

Page 16, table 9, unit column, opposite vegetables--
change line 22 to "Sales in dollars" and
change line 23 to "Acres harvested."

Page 17, table 10, column 1, row 2, opposite tobacco--
change 31.4 to 62.9.

Page 23, paragraph 1, lines 7 and 8, change percentages as follows:

81 percent to 79 percent
64 percent to 61 percent
69 percent to 64 percent

Page 35, paragraph 2, line 2, should read--

"...operators with less education..."

PREFACE

This report is based mainly on information shown in a special tabulation of 1964 Census of Agriculture data for farms with annual sales of $100,000 or more. The tabulation was obtained from the Bureau of the Census, Department of Commerce.

This tabulation permits us, for the first time, to present comprehensive national and regional information on the largest farms, by sales group, including farms with annual sales of $1 million or more. These are the latest and only data available nationwide on the largest farms. The data were not available until 1969, and no new data are expected for several years to come.

Administrators, legislators, and the general public have expressed widespread interest and concern with respect to large-scale farms. This report will provide information that should help put issues concerning these farms into proper perspective, especially as concerns their importance in the future organizational structure of agriculture.

Specific acknowledgement of their valuable cooperation is made to J. Thomas Breen, Chief, and to Arnold L. Bollenbacher and John A. Blackledge, Statisticians, Agriculture Division, the Bureau of the Census. Acknowledgement is also due to Ella S. Wells, statistical assistant, USDA, whose competent statistical work served as the basis for this study.

Note: In this report, size of farm is delineated as follows:

	Gross sales
The largest	$100,000 or more
Large	$20,000 to $99,999
Medium	$5,000 to $19,999
Small	Less than $5,000

Within the "largest" farm size, farms with sales of $1 million or more are referred to as "Top-Scale."

Other sources frequently refer to the "largest" farms (sales of $100,000 or more) as "large-scale" farming.

Washington, D.C. 20250 March 1970

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SUMMARY

In 1964, 31,401 farms with product sales of $100,000 or more accounted for 24 percent of all farm product sales. Of these largest U.S. farms, 919 had sales of $1 million or more, or 7 percent of all sales. In 1959, only 19,979 farms had sales of $100,000 or more, and 408 farms had sales of $1 million or more--accounting for 16 percent and 4 percent of all farm sales.

The importance of these largest farms is especially pronounced in the West. In 1964, while farms with product sales of $100,000 or more accounted for 12 percent of all farm product sales in the North and 24 percent in the South, they accounted for 53 percent in the West (see map on page iv). The concentration of a relatively small number of large farms in the West is evidenced by the fact that 524 farms with product sales of $1 million or more--0.2 percent of all farms in the West--accounted for more than a fifth of all farm product sales in that part of the country. Farms of this size accounted for 5 percent of all farm product sales in the South and only 2 percent in the North.

Poultry and other meat-producing farms accounted for 42 percent of all farms with $100,000 or more of sales and for 47 percent of their marketings. Within this sales group, meat-producing farms accounted for 54 percent of all farms with sales of $1 million or more, and 59 percent of their marketings.

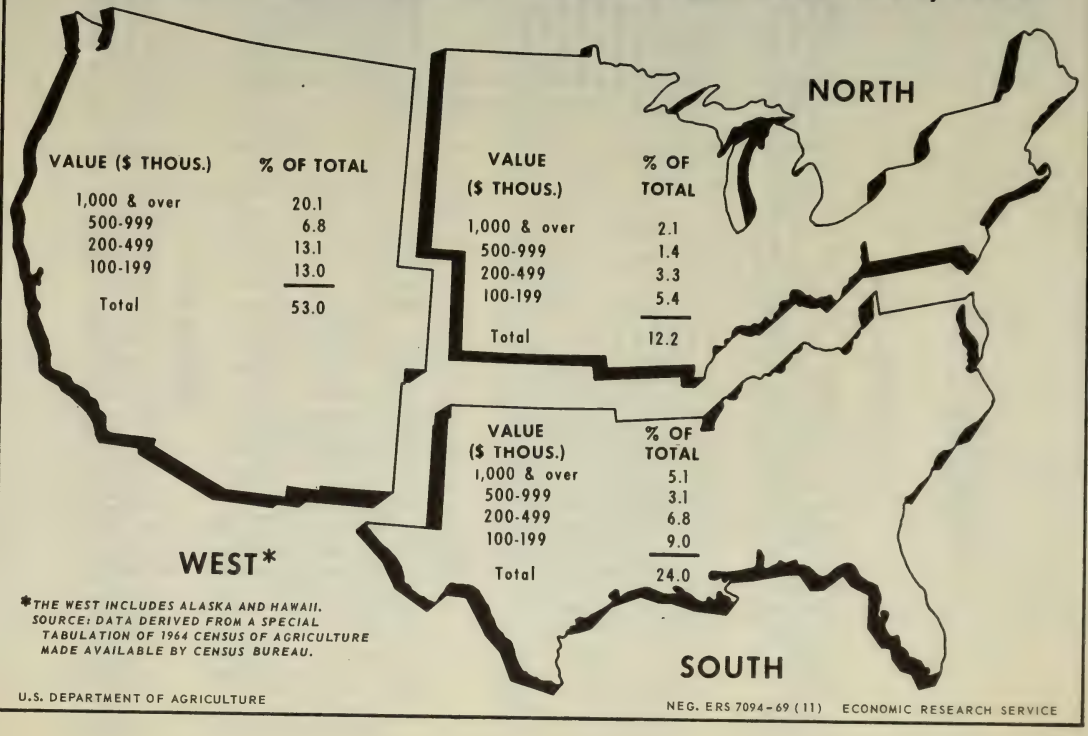
Farms with sales of $100,000 or more had 121 million acres of land--11 percent of total farmland. This acreage was mostly in grazing land--66 percent--followed by 24 percent in cropland and 7 percent in woodland.

Operators on the largest farms are about the same age as those on other commercial farms, but they have a higher educational attainment.

Farms with sales of $100,000 or more are predominantly operated with hired labor. However, in some parts of the country, such as in the Corn Belt and the Lake States regions, many of these farms are family-operated. In California in 1964, only 4 percent of all sales by these largest farms came from family-operated units, but in Iowa this proportion was 45 percent.

These largest farms have a greater technical efficiency than smaller farms, as measured by ratios such as acres harvested per machine, yield per acre, and output per animal. However, the ratio, purchased inputs per unit of output, for the largest farms is much greater than for smaller farms.

MARKETINGS BY THE LARGEST FARMS AS A PERCENTAGE OF TOTAL FARM SALES, BY GEOGRAPHIC DIVISIONS, 1964



*THE WEST INCLUDES ALASKA AND HAWAII.
SOURCE: DATA DERIVED FROM A SPECIAL TABULATION OF 1964 CENSUS OF AGRICULTURE MADE AVAILABLE BY CENSUS BUREAU.

U.S. DEPARTMENT OF AGRICULTURE

NEG. ERS 7094-69 (11) ECONOMIC RESEARCH SERVICE

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OUR 31,000 LARGEST FARMS

by

Radoje Nikolitch, Agricultural Economist
Farm Production Economics Division

INTRODUCTION

U.S. farms with annual sales of $100,000 or more of farm products had average marketings of $272,000 in 1964. In that year, more than 31,000 farms were in that size class. These farms are small businesses compared with firms in most other commodity-producing industries. However, they are the largest in the farm economy.

The aim of this report is to determine the relative position and recent trends of the largest farms in American agriculture. More specifically, the report will describe their types of enterprise, their production resources, the type of land tenure under which the farms are operated, the farm operators, the portion of farms that are family-operated, and how efficiently the largest farms use their production resources. This analysis, it is hoped, will contribute to a better understanding of the largest farms in U.S. agriculture and may also help to answer questions often asked about large-scale farming. For example, what is the real problem, if any, presented by big farms? Do they tend to dominate the farming industry? Is large-scale farming necessary on certain types of farms for economic efficiency?

RELATIVE SALES POSITION OF THE LARGEST FARMS

In 1959, 19,979 farms with sales of $100,000 or more accounted for 0.5 percent of all farms and more than 16 percent of total farm marketings. By 1964 the number of such farms had increased considerably. In that year, 31,401 farms--about 1 percent of all farms--had sales of $100,000 or more and accounted for almost a fourth of total farm marketings. The number of farms and value of sales expanded for all sales classes. The number of farms with sales of $1 million or more increased from 408 in 1959 to 919 in 1964, accounting for 4.2 percent of all farm products sold in 1959, compared with 6.8 percent in 1964 (table 1). The importance of these farms varies greatly by business size of farm (explained below) and by region.

Business Size

On the basis of gross sales, all Census-reported farms were classified into four size groups for this report. The first group includes the largest farms, with annual sales of $100,000 or more. The second group consists of large farms with annual sales of $20,000 to $99,999.

Table 1.--Number and sales of farms with sales of $100,000 or more, and their percentage of total farm sales, by specified size, 1959 and 1964

Size of farm in value of sales	1959			1964			Sales as a percentage of total farm sales	
	Farms	Value of sales		Farms	Value of sales			
		Total	Per farm		Total	Per farm	1959	1964
	Number	Billion dollars 1/	1,000 dollars 2/	Number	Billion dollars	1,000 dollars	Percent	Percent
$1,000,000 or more.....	408	1.3	3,186	919	2.4	2,576	4.2	6.8
$500,000-$999,999.....	800	.5	651	1,574	1.1	678	1.7	3.1
$200,000-$499,999.....	4,570	1.3	280	7,760	2.2	290	4.2	6.4
$100,000-$199,999.....	14,201	1.9	131	21,148	2.8	135	6.2	8.0
Total.....	19,979	5.0	249	31,401	8.5	272	16.3	24.3

1/ Estimated by multiplying average sales by number of farms.
2/ Estimated by comparing sales distributions in 1959 and 1964.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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The third group is composed of medium-sized farms, with annual sales of $5,000 to $19,999. The fourth group, small farms, includes all farms with sales of less than $5,000. These farms are small commercial units that provide inadequate employment for farm operators and income for their families or they are part-time and part-retirement units.1/

Changes in size in these four groups from 1959 to 1964 indicate a continuing trend toward fewer and larger commercial farms. Medium- and large-sized farms, in 1964, still accounted for the largest part of farm sales (68 percent), current farm operating expenses (62 percent), and farm real estate value (65 percent) (table 2).

Four additional observations are relevant for understanding the measurement of farm size by gross sales and the economic importance of farms in different size sectors.

Measurements Between Time Periods

Some economists have indicated problems in using gross sales as a measure of size. For example, Mighell points out that "the usual comparisons of numbers of farms by economic classes between two periods in which there has been a general growth in size, seem to imply a faster rate of growth on the part of large farms than is actually the case. This is because a fixed set of sales classes cuts different sectors of the frequency distribution appropriate to each period." Using Lorenz curve analysis, he avoided the bias and found that gross sales per farm increased only slightly more in the higher percentiles.2/ The author of the present study is not a critic of gross sales as a measure of farm size.3/

Interfarm Trade of Farm Products

Increasing specialization among farmers, as is well known, is associated with a considerable increase in purchased inputs needed for farm production. What is not so often thought of is that this increasing specialization is associated also with an increasing degree of interfarm sales of farm products. That is, more and more farm products in their different processing stages are traded successively to different farms, mostly by dealers but also among farmers, before these products go to nonfarm markets. Thus, the amount of interfarm trade inflates considerably the reported value of gross sales by any group of farms, especially livestock farms. The extent of this inflation equals the cost of agricultural products paid to the farmer originally producing these products

---

1/ Part-time and part-retirement units are small noncommercial farms with less than $2,500 of farm products sold annually, and they are more residential than productive farms. Nonfarm occupations are the main source of income on part-time units, and various retirement benefits, as well as nonfarm occupations, are the main source of income on part-retirement units.

2/ Ronald L. Mighell, paper given at annual meeting, American Association of Agricultural Economists, University of Kentucky, Aug. 19-23, 1969.

3/ See this report, section on business size of farms, and Radoje Nikolitch and Dean E. McKee, "The Contribution of the Economic Classification of Farms to the Understanding of American Agriculture," Jour. of Farm Econ., Vol. 47, No. 5, Dec. 1965, pp. 1545-1554.

Table 2.--Number of farms, sales, selected farm production expenditures, and real estate value of farm, and as a percentage of all farms, by size of farm, 1959 and 1964

Size of farm 1/	Number of farms 2/		Sales		Selected expenditures 3/		Real estate value of farm	
	1959	1964	1959	1964	1959	1964	1959	1964
	Thousands	Thousands	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
The largest	20	31	4,981	8,539	2,990	5,103	11,136	19,470
Large	292	371	10,319	13,588	5,321	6,544	31,074	50,503
Medium	1,137	972	11,428	10,267	4,963	4,271	49,552	52,733
Small 4/	2,256	1,782	3,789	2,754	1,953	1,581	31,860	35,395
Total	3,705	3,156	30,517	35,148	15,227	17,499	123,622	158,101
	Percentage of total for all farms							
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
The largest	0.5	1.0	16.3	24.3	19.6	29.2	9.0	12.3
Large	7.9	11.7	33.8	38.7	35.0	37.4	25.1	31.9
Medium	30.7	30.8	37.5	29.2	32.6	24.4	40.1	33.4
Small 4/	60.9	56.5	12.4	7.8	12.8	9.0	25.8	22.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
2/ Indian reservations, institutional and other special farms not included.
3/ Feed, livestock, seed, fertilizer, petroleum products, machine hire, and hired labor.
4/ Operator households on these farms have, on the average, more nonfarm than farm income.

Source: Derived from the 1964 Census of Agriculture, Vol. II, Ch. 6.

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and is reflected in gross sales of the farmer buying the products. Information is not available to determine exactly when and in what form farm products bought from other farms were resold to nonfarm markets. However, that part of the cost of such purchases paid to original producers on the selling farms provides a good indication of the proportion of interfarm sales included by farmers in reports of their total gross sales.

Interfarm trade increases with the size of farm. In 1964, such trade amounted to 27 percent of gross sales for farms with $100,000 or more of sales, and 36 percent for the 919 units with sales of $1 million or more (app. table 1).

Business Size of Farms

Interfarm trade can measure fairly accurately the overestimation of net agricultural production on farms as a group. The Nation's largest farms have produced considerably fewer farm products in a value-added sense than would usually be estimated from their gross sales. But this fact does not lessen their economic importance or business size in other respects. The importance and size of a business is determined by the value of its purchased and nonpurchased inputs, as well as by the value of its output. Buying and selling, as well as managing and working, are all important economic activities and together shape the size and the economic importance of a business. For example, in a value-added sense, cattle feedlots have relatively little net agricultural production. However, as "buyers" of steers and feed and as "sellers" of large numbers of fed cattle, they influence and greatly control the supply, marketings, and quality of these farm products in a given region, if not nationally. Thus, the value of net agricultural production of large feedlots (capacity of 1,000 head or more) was estimated to have been less than $99 million in 1964, or only 7.3 percent of the value of all cattle slaughtered in that year. But it was also estimated that such large feedlots accounted for a fifth of the total marketing of all cattle for slaughter (app. table 2).

Small Units

Units with less than $5,000 of sales are probably not the farms of the future. But they continue to be an important part of the farm economy. In 1964, 1.8 million small farms had sales under $5,000. Together, these farms sold $2.8 billion of farm products--8 percent of total nationwide sales--and accounted for 23 percent of total farm real estate value, and 9 percent of the main purchased farm production inputs.4/ More than 52 percent (about 6 million people) of the total farm population lived on these small units, where farming is mostly a part-time occupation and a secondary source of family livelihood.5/ However, in 1964, total value of marketings of small farms was higher than that for the few farms with sales of $1 million or more. The economic and social significance of these aspects of U.S. farming organization can hardly be overestimated.

4/ In 1964, small farms accounted for (by value) 8 percent of all corn produced, 9 percent of wheat, 25 percent of tobacco, 5 percent of milk sold, and 9 percent of all cattle and calves sold.

5/ 1964 Census of Agriculture, Vol. 2, Ch. 6, table 15, p. 641.

Regional Differences

The economic importance of large-scale farming differs greatly by geographic regions. Farms with sales of $100,000 or more accounted for 12 percent of total 1964 farm marketings in the North, 24 percent in the South, and 53 percent in the West. These differences are even more pronounced for farms with sales of $1 million or more. In 1964, such farms accounted for only 2 percent of total farm marketings in the North and 5 percent in the South. However, in the West, the 524 topscale farms accounted for 20 percent of all farm sales there (see map on inside cover and app. table 3).

A more complete regional analysis is possible for the Nation's largest farms when they are considered as one group. They are concentrated in the Pacific, Mountain, and Southern Plains regions and in each region have a different economic importance. In 1964, farms with sales of $100,000 or more accounted for 59 percent of all farm sales in the Pacific region and 35 to 40 percent in the Mountain and Southeast regions, but less than 10 percent in the Lake States, Corn Belt, and Appalachian regions (table 3).

The economic importance of these farms differs even more by individual States. California alone had 22 percent of the total number and 28 percent of the total sales.

Average 1964 sales were highest in Arizona, Florida, and California--$436,000, $406,000, and $342,000 respectively. They were only about $200,000 in all States in the Corn Belt and Lake States regions (app. table 4).

Measuring the economic importance of a farm business by the value of its sales, we can separate States into three broad categories: States where marketings by farms with sales of $100,000 or more accounted for more than 50 percent of the value of all farm products sold, States where this proportion ranged from more than 20 percent to 49.9 percent, and States where such marketings accounted for less than 20 percent of all farm products sold.

Arizona, California, and Florida are the States where the economic importance of large-scale farming is the greatest. In Arizona, farms with 1964 sales of $100,000 or more accounted for 13 percent of all the State's farms and 78 percent of all farm products sold. In both California and Florida, these largest units accounted for 7 percent of all farms in these States and for 69 percent of all sales. In both the Lake States and the Corn Belt regions, by contrast, the largest farms accounted for only about 5 percent of all farms and for less than 10 percent of all farm sales (fig. 1).

THE LARGEST FARMS BY TYPE OF ENTERPRISE

The economic importance of the largest farms varies also by type of farm, and within the types by region, source of sales, and specialization of production.

Cotton, poultry, and other meat-producing livestock farms (including ranches) account for most large-scale farms. In 1964, these types of farms constituted more than half of all the largest farms (53 percent)

Table 3.--Number and sales of farms with sales of $100,000 or more and their regional distribution, 1959 and 1964

Region	Number of farms		Sales		Percentage of total farm sales		Average sales per farm		1964 regional distribution	
	1959	1964	1959	1964	1959	1964	1959	1964	Number	Sales
	Number	Number	Million dollars	Million dollars	Percent	Percent	1,000 dollars	1,000 dollars	Percent	Percent
New England	384	862	75.0	192.9	12.3	26.9	195	224	2.7	2.3
Middle Atlantic	923	1,833	199.0	380.9	9.7	17.0	216	208	5.9	4.5
Lake States	541	1,228	99.2	246.0	3.5	7.6	183	200	3.9	2.9
Corn Belt	1,986	3,913	375.1	740.1	5.4	9.4	189	189	12.5	8.8
Northern Plains	1,486	2,271	381.6	656.7	11.6	17.7	257	289	7.3	7.8
Appalachian	591	1,183	115.4	249.5	5.0	9.1	195	211	3.7	3.0
Southeast	1,723	3,086	485.5	953.1	23.8	35.7	282	309	9.9	11.4
Delta States	1,516	2,854	276.2	549.7	18.0	28.0	182	193	9.1	6.5
Southern Plains	2,278	2,775	464.7	703.5	17.2	24.9	204	254	8.9	8.4
Mountain	2,306	2,992	667.9	1,001.0	28.4	39.5	290	335	9.6	12.0
Pacific	6,127	8,276	1,721.4	2,709.5	44.7	59.3	281	327	26.5	32.4
United States 1/	19,861	31,273	4,861.0	8,382.9	16.0	24.2	245	268	100.0	100.0

1/ Hawaii not included.

Source: 1964 Census of Agriculture, Vol. I, State table 23.

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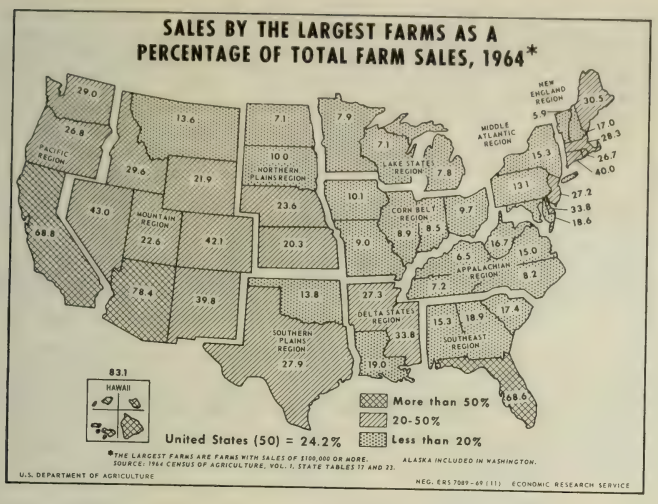

Figure 1

and more than half of their sales (56 percent). Vegetable, fruit, and other meat-producing livestock farms (including ranches), on the other hand, accounted for about two-thirds of all farms with sales of $1 million or more (64 percent) and for two-thirds of their sales (68 percent) (app. table 5).

Although few in number, farms with sales of $1 million or more are economically important in most types of farms. In 1964, the 94 topscale vegetable farms accounted for 23 percent of the sales of the Nation's 23,207 commercial vegetable farms. The 68 topscale field crop farms (other than cash-grain, tobacco, and cotton farms) with $1 million or more sales, accounted for 16 percent of sales from the Nation's 35,130 commercial field crop farms. The 322 topscale livestock farms (other than poultry farms, dairy farms, and ranches) accounted for 11 percent of all sales by the 514,529 commercial livestock farms. The 81 topscale ranches accounted for 20 percent of all sales by the 66,282 commercial ranches. The 48 topscale miscellaneous farms accounted for 8 percent of all sales by the 78,528 commercial miscellaneous farms. The sales proportions by units with sales of $1 million or more were considerably smaller for the topscale cash-grain and dairy farms (table 4).

Two additional observations concerning the number and sales of farms with sales of $100,000 or more are relevant here. Changes over time in the number of these farms varied greatly by type of farm. From 1959 to 1964, the largest farms of the field crop and poultry farm types increased in number at a fast rate. The rate was slower for the largest cotton, fruit, and dairy farms (app. table 6).

Table 4.--Farms with sales of $100,000 or more, by specified size, and their sales as a percentage of all commercial farms, by type of farm, 1964

Type of farm	All commercial farms	Size in value of sales: Total $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	No.	No.	No.	No.	No.	No.
All commercial farms	2,165,712	31,401	919	1,574	7,760	21,148
Cash-grain	404,253	2,141	5	29	345	1,762
Tobacco	171,384	102	11	7	27	57
Cotton	164,076	3,465	36	112	847	2,470
Other field crops	35,130	2,237	68	83	560	1,526
Vegetable	23,207	1,590	94	158	521	817
Fruit and nut	57,256	2,511	93	168	711	1,539
Poultry	82,120	4,744	89	224	1,212	3,219
Dairy	366,967	2,576	19	93	609	1,855
Livestock farms (other than poultry and dairy farms and livestock ranches)	514,529	6,692	322	368	1,436	4,566
Livestock ranches	66,282	1,815	81	117	485	1,132
General	201,980	1,884	53	90	504	1,237
Miscellaneous	78,528	1,644	48	125	503	968
	Sales	Sales as a percentage of all commercial farm sales				
	Mil. dol.	Pct.	Pct.	Pct.	Pct.	Pct.
All commercial farms	34,369	24.8	6.9	3.1	6.5	8.3
Cash-grain	5,506	6.4	0.1	0.3	1.8	4.2
Tobacco	1,119	4.0	2.2	0.4	0.7	0.7
Cotton	2,434	31.3	4.5	3.1	10.0	13.7
Other field crops	1,289	49.1	16.1	4.4	12.4	16.2
Vegetable	857	67.0	22.8	12.8	18.3	13.1
Fruit and nut	1,616	46.6	13.3	7.0	13.2	13.1
Poultry	2,919	38.0	5.7	5.3	12.1	14.9
Dairy	5,355	9.9	0.7	1.3	3.2	4.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	8,295	26.8	11.4	3.0	5.0	7.4
Livestock ranches	1,410	46.5	19.7	5.7	10.3	10.8
General	2,621	18.3	4.0	2.3	5.6	6.4
Miscellaneous	948	44.5	7.5	8.4	15.0	13.6

Source: Census of Agriculture, Vol. II, Ch. 10, table 8 and derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Average sales of the largest farms also differ by type of farm. Those in the tobacco, vegetable, fruit, and meat-producing livestock groups had the highest average annual sales. The largest cash-grain and dairy farms had lower average sales. The largest cotton and other field crop farms had higher average sales than did the largest tobacco, vegetable, and fruit farms. For the 919 topscale farms (sales of $1 million or more), livestock ranches and other field crop farms had the largest average annual sales (app. table 7).

Geographic Regions

In 1964, farms with sales of $100,000 or more were slightly more numerous in the West than in the South, and slightly more numerous in the South than in the North (table 5). The largest vegetable, fruit, dairy, and general farms, as well as the largest livestock ranches, were concentrated in the West; and the largest cash-grain, tobacco, cotton, and poultry farms, in the South. Livestock and field crop farms, as well as miscellaneous farms, occurred mostly in the North.

The 919 farms with sales of $1 million or more have a somewhat different geographic distribution by type of farm. Except for tobacco, miscellaneous, fruit, and poultry farms, topscale farms were centered in the West in 1964. Topscale tobacco and miscellaneous farms were mainly in the North. Fruit and poultry farms of this size were most numerous in the South. In 1964, the North had only 18 percent of all topscale farms and accounted for only 15 percent of total marketings from this size class (table 5 and app. table 8).

The dominance of the largest farms in the West is evident for all types of farms in that part of the country, but is especially pronounced for vegetable, cotton, other field crop, poultry, and other livestock farms (table 6 and app. tables 9, 10, and 11).

The size of these largest farms by type of farm also differs by regions. Generally, these farms are larger in the West and South than in the North (app. table 12).

The Source of Sales

An increasing amount of farm products are marketed from the largest farms. But these increases vary greatly depending on the kind of products marketed. For example, the largest farms' share of vegetables sold increased from 49 percent in 1959 to 61 percent in 1964; for fruits and nuts, their share increased from 31 to 46 percent; for poultry and poultry products, from 17 to 35 percent; and dairy products, only from 7 to 11 percent (table 7).

Marketings by the largest farms increased as a proportion of all sales especially rapidly for eggs and potatoes. But the increase is also considerable for many other commodities (app. table 13).

In 1964, more than half of all cattle fattened on grain and concentrates came from farms with sales of $100,000 or more. The largest farms accounted also for 61 percent of vegetables sold, 58 percent of turkeys raised, 46 percent of acreage in Irish potatoes, 37 percent of acreage in rice, 32 percent of land in orchards, and 30 percent of acreage in sugarbeets. Their share in other farm products was much smaller. The largest farms accounted for only 4 percent of hogs and pigs sold, 6

Table 5.--Percentage distribution of number and sales of farms, by specified value of sales, by type of farm and by geographic regions, 1964

Type of farm	Farms with sales of $100,000 or more				Farms with sales of $1,000,000 or more			
	Total farms	Regional distribution of farms			Total farms	Regional distribution of farms		
		North	South	West		North	South	West
	No.	Pct.	Pct.	Pct.	No.	Pct.	Pct.	Pct.
All farms	31,401	30.8	32.9	36.3	919	18.1	24.9	57.0
Cash-grain	2,141	19.1	50.7	30.2	5	---	---	100.0
Tobacco	102	39.2	60.8	---	11	100.0	---	---
Cotton	3,465	1.3	70.3	28.4	36	---	11.1	88.9
Other field crops	2,237	42.0	17.7	40.3	68	7.4	13.2	79.4
Vegetable	1,590	15.0	24.5	60.5	94	2.1	33.0	64.9
Fruit and nut	2,511	12.2	30.0	57.8	93	1.1	58.1	40.8
Poultry	4,744	32.6	47.0	20.4	89	21.3	42.7	36.0
Dairy	2,576	11.9	26.1	62.0	19	10.5	36.9	52.6
Livestock farms (other than poultry and dairy farms and livestock ranches)	6,692	70.9	11.0	18.1	322	31.1	15.8	53.1
Livestock ranches	1,815	10.6	31.4	58.0	81	6.2	24.7	69.1
General	1,884	9.2	28.4	62.4	53	---	3.8	96.2
Miscellaneous	1,644	45.3	27.4	27.3	48	43.7	27.1	29.2
	Sales	Regional distribution of sales			Sales	Regional distribution of sales		
	Mil. dol.	Pct.	Pct.	Pct.	Mil. dol.	Pct.	Pct.	Pct.
All farms	8,539	24.9	29.8	45.3	2,367	15.1	23.0	61.9
Cash-grain	352	16.0	48.4	35.6	7	---	---	100.0
Tobacco	44	77.2	22.8	---	24	100.0	---	---
Cotton	762	0.9	57.1	42.0	111	---	4.4	95.6
Other field crops	633	28.6	17.1	54.3	208	3.8	15.2	81.0
Vegetable	575	9.2	28.4	62.4	195	1/	1/	64.1
Fruit and nut	754	7.5	42.0	50.5	215	1/	1/	34.2
Poultry	1,109	29.0	46.9	24.1	166	16.3	45.9	37.8
Dairy	530	9.7	27.8	62.5	38	1/	1/	1/
Livestock farms (other than poultry and dairy farms and livestock ranches)	2,223	49.7	13.2	37.1	948	26.6	14.4	59.0
Livestock ranches	655	7.2	26.5	66.3	278	2.9	18.0	79.1
General	480	6.1	19.0	74.9	106	---	1/	1/
Miscellaneous	422	44.2	26.9	28.9	71	44.4	24.0	31.6

1/ Data withheld to avoid disclosure of operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Table 6.--Number and sales of farms, by specified value of sales, and their percentage of commercial farms, by type of farm and by geographic region, 1964

Type of farm	North			South			West		
	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms
All commercial farms	No.	Pct.	Pct.	No.	Pct.	Pct.	No.	Pct.	Pct.
Cash-grain	309,860	0.1	---	66,438	1.6	---	27,955	2.3	1/
Tobacco	3,221	1.2	0.3	168,163	1/	1/	---	---	---
Cotton	3,484	1.3	---	154,336	1.6	1/	6,256	15.7	0.5
Other field crops	7,996	11.8	0.1	18,184	2.2	0.1	8,950	10.1	0.6
Vegetables	9,005	2.6	1/	9,137	4.3	0.3	5,065	19.0	1.2
Fruit and nut	12,236	2.5	1/	12,595	6.0	0.4	32,425	4.5	0.1
Poultry	28,884	5.3	0.1	46,998	4.7	0.1	6,238	15.6	0.5
Dairy	286,765	0.1	1/	57,982	1.2	1/	22,220	7.2	1/
Ranches	6,377	3.0	0.1	34,573	1.7	0.1	25,332	4.2	0.2
Other livestock	342,499	1.4	1/	133,445	0.5	1/	38,585	3.1	0.4
General	98,840	0.2	---	78,779	0.6	1/	24,361	4.8	0.2
Miscellaneous	27,920	2.7	0.1	39,219	1.1	1/	11,389	3.9	0.1
	Sales	Sales as a percentage of all commercial farm sales		Sales	Sales as a percentage of all commercial farm sales		Sales	Sales as a percentage of all commercial farm sales	
All commercial farms	Mil. dol.	Pct.	Pct.	Mil. dol.	Pct.	Pct.	Mil. dol.	Pct.	Pct.
Cash-grain	3,882	1.4	---	1,010	16.9	---	617	20.3	1.2
Tobacco	48	71.0	49.7	1,071	0.9	---	---	---	---
Cotton	64	10.5	---	1,903	22.9	0.2	467	68.6	22.8
Other field crops	405	44.7	1.9	323	33.6	9.8	561	61.3	30.1
Vegetable	176	30.1	2/	228	71.5	2/	453	79.1	27.7
Fruit and nut	235	24.1	2/	477	66.5	2/	904	42.1	8.2
Poultry	906	35.5	3.0	1,596	32.6	4.8	417	64.2	15.1
Dairy	3,629	1.4	2/	981	15.0	2/	745	44.4	2/
Ranches	133	35.6	6.1	470	36.9	10.6	806	53.8	27.2
Other livestock	6,034	18.3	4.2	1,001	29.4	13.6	1,260	65.5	44.4
General	1,065	2.7	---	835	10.9	2/	721	49.9	2/
Miscellaneous	462	40.4	6.8	258	44.1	6.6	228	53.4	9.8

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of operations.

Source: 1964 Census of Agriculture, Vol. II, Ch. 10, table II, and derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Table 7.--Value of products sold by farms with sales of $100,000 or more, and percentage their sales are of all farm sales, by source of sales, 1959 and 1964

Farm products sold by source	Value of sales		Percentage of all farm sales	
	1959	1964	1959	1964
	Million dollars	Million dollars	Percent	Percent
Farm products	4,981	1/8,533	16.3	24.2
Crops	2,386	4,007	17.7	24.4
Field crops other than vegetable, fruits, and nuts	1,261	2,255	12.0	17.5
Vegetables	371	601	48.9	60.9
Fruits and nuts	438	765	31.0	45.7
Forest products and horticultural specialty products	316	386	38.4	43.9
Livestock and poultry and their products	2,595	4,526	15.1	24.0
Poultry and poultry products	396	1,082	16.8	35.3
Dairy products	297	487	7.4	10.5
Livestock and livestock products other than poultry and dairy	1,902	2,957	17.6	26.5

1/ Does not include income from recreation facilities.

Source: 1964 Census of Agriculture, Vol. I, Ch. 6, table 15.

percent of milk cows on the farm, 3 percent of the acreage in corn harvested for grain, and 7 percent of the acreage of soybeans harvested (table 8).

In 1964, farms with sales of $1 million or more accounted for more than 27 percent of all fattened cattle sold and 21 percent of all vegetables sold. These farms were much less important for other farm products. However, they all reported a large amount of production. Of top-scale farms, 426 sold annually an average 12,000 head of fattened cattle.

Table 8.—Sales, production, or acres harvested on farms with sales of $100,000 or more, by specified size as a percentage of all farms, 1964

Specified products	Unit	Percentage of all farms				
		Total $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
		Percent	Percent	Percent	Percent	Percent
Livestock:						
Cattle and calves	Head sold	23.1	9.2	2.7	4.8	6.4
Cattle fattened on grain	do.	51.3	27.2	5.9	8.4	9.8
Calves fattened on grain	do.	20.9	7.6	3.0	5.3	5.0
Milk cows	Head on farm	5.9	0.4	0.6	1.9	3.0
Steers and bulls	do.	21.4	7.4	2.4	4.9	6.7
Hogs and pigs	Head sold	4.1	0.2	0.2	1.1	2.6
Sheep and lambs	do.	25.4	6.1	3.1	6.8	9.4
Poultry:						
Broilers and other meat-type chickens	Number sold	21.2	4.9	1.8	4.7	9.8
Hens and roosters for slaughter	do.	30.0	4.3	4.8	10.2	10.7
Turkeys	Number raised	57.8	7.8	6.9	18.2	24.9
Specified crops:						
Corn for grain	Acres harvested	3.1	0.1	0.2	0.7	2.1
Corn for silage, fodder and hogged	do.	6.0	0.4	0.6	1.7	3.3
Wheat	do.	4.6	0.2	0.3	1.1	3.0
Rice	do.	37.3	1.5	2.6	12.3	20.9
Sorghum for all purposes	do.	14.8	0.8	1.3	4.1	8.6
Soybeans for beans	do.	7.1	0.1	0.4	2.0	4.6
Soybeans for beans	Bushels harvested	7.0	0.1	0.4	2.0	4.5
Peanuts for nuts	Acres harvested	5.5	0.1	0.3	1.2	3.9
Field seed	do.	7.8	1.9	0.9	2.3	2.7
Irish potatoes	do.	46.2	6.0	5.1	15.1	20.0
Sugarbeets for sugar	do.	29.9	3.5	3.4	10.8	12.2
Sugarbeets for sugar	Tons harvested	35.3	4.4	4.1	13.0	13.8
Vegetables	Sales in dollars	40.3	9.2	6.5	13.2	11.4
Vegetables	Acres harvested	60.9	21.3	11.1	16.0	12.5
Land in orchards	Acres planted	31.8	7.9	4.2	9.6	10.1
Nursery and greenhouse products	Sales in dollars	52.6	9.4	10.6	17.9	14.7
Cotton	Bales harvested	29.9	4.5	3.3	9.5	12.6
Tobacco	Pounds harvested	2.0	0.5	0.1	0.5	0.9

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census and from Census of Agriculture, Vol. II, Ch. 6, table 15.

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For the 200 topscale farms reporting vegetables sold, the average was 1,500 acres in harvested vegetables. For broilers, the 32 topscale farms sold about 3 million broilers per farm. The 195 topscale farms reporting cotton produced an average 3,400 bales per farm; 48 topscale farms averaged 1,200 milk cows; 67 topscale farms sold 20,000 sheep and lambs; 17 of these farms averaged more than half a million pounds of tobacco; and 188 topscale farms averaged 1,800 acres of orchards (table 9).

Census data show that, in 1964, many of the farms with sales of $100,000 or more produced more than one main product, and had considerable sideline production. 6/ But, however large in absolute terms, this sideline production represented only a small fraction of the total production of these farms. As shown below, the 31,401 largest farms are highly specialized in their production.

Specialization of Production

The degree of specialization of production was measured by the percentage that production of the main product or products was of total production. It is evident that production is highly specialized for all sizes of farms. However, the degree of specialization increases with the size of farm, except for tobacco, cotton, vegetable, and dairy farms. In 1964, sales of the main products accounted for more than 90 percent of total farm sales by most of the largest farms. The lower degree of specialization on cotton and especially tobacco farms is due mainly to the acreage allotment regulations for these two crops and to their more exclusive Census classification. In 1964, sales of dairy products by the largest dairy farms amounted to only 86.6 percent of total farm sales by these farms. However, if sales of calves--which probably should be considered one of the main products of dairy farms--are added, the percentage rises above the 90-percent mark. The apparently lower degree of specialization on vegetable farms is because many of these farms (especially in California) grow potatoes, sugarbeets, and a few other field crops not classified by Census as vegetables (table 10).

PRODUCTION RESOURCES ON THE LARGEST FARMS

The largest farms are becoming economically more important not only through their increasing commercial production, but also through the increasing value of their production expenditures, their greater use of hired labor, by the increasing acreage they operate, and by the increasing value of their farm equipment. These increases also mean, of course, that their net production increase, in a value-added sense, is less than their gross sales would suggest.

Purchased Inputs

In 1959, the largest farms accounted for 16 percent of all feed bought by farmers, and in 1964, this proportion increased to 29 percent. For the same period, purchases of livestock and poultry increased from 28 to 39 percent, purchased seed from 15 to 17 percent, purchased fuel and oil from 8 to 11 percent, expenses for machine hire from 15 to 24 percent, and expenses for hired labor from 30 to 40 percent (table 11).

6/ 1964 Census of Agriculture, Vol. II, Ch. 6, p. 609.

Table 9.--Average and total production, sales, or acres harvested on farms with sales of $1 million or more and as a percentage of all farms, 1964

Specified product	Unit	Farms reporting	Average per farm reporting	Total by farms reporting	Total as percentage of total for all farms
		Number	Units 1/	Units 1/	Percent
Livestock and poultry sold alive or on farms					
Livestock:					
Cattle and calves	Head sold	560	10,297	5,766,549	9.2
Cattle fattened on grain	do.	426	12,019	5,120,146	27.2
Calves fattened on grain	do.	54	4,801	259,233	7.6
Milk cows	Head on farm	48	1,225	58,804	0.4
Steers and bulls	do.	542	3,989	2,161,789	7.4
Hogs and pigs	Head sold	72	2,058	148,153	0.2
Sheep and lambs	do.	67	19,981	1,338,739	6.1
Poultry:					
Broilers and other meat-type chickens	Number sold	32	2,922,213	93,510,811	4.9
Hens and rooster for slaughter	do.	83	105,638	8,767,981	4.3
Turkeys	Number raised	32	253,966	8,126,906	7.8
Specified crops:					
Corn for grain	Acres harvested	80	538	43,057	0.1
Corn for silage, fodder and hogged	do.	133	294	39,146	0.4
Wheat	do.	123	607	74,603	0.2
Rice	do.	21	1,302	27,345	1.5
Sorghum for all purposes	do.	154	478	73,611	0.8
Soybeans for beans	do.	28	866	24,249	0.1
Soybeans for beans	Bushels harvested	28	20,541	575,139	0.1
Peanuts for nuts	Acres harvested	5	357	1,784	0.1
Irish potatoes	do.	73	965	70,465	6.0
Sugarbeets for sugar	do.	106	460	48,782	3.5
Sugarbeets for sugar	Tons harvested	106	9,582	1,015,662	4.4
Vegetables	Acres harvested	200	1,050,898	210,179,545	21.3
Vegetables	Sales in dollars	200	1,543	308,693	9.2
Land in orchards	Acres planted	188	1,787	335,969	7.9
Nursery and greenhouse products	Sales in dollars	69	961,184	66,321,722	9.4
Cotton	Bales harvested	195	3,377	658,442	4.5
Tobacco	Pounds harvested	17	552,505	9,392,595	0.5

1/ See unit column.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Table 10.--Sales of the main product or group of products as a percentage of total sales, by type and size of farm, 1964

Type of farm	Sales of main product or group of products as a percentage of total farm sales of -- 1/			
	The largest farms 2/	Large farms 2/	Medium-sized farms 2/	Small farms 2/
	Percent	Percent	Percent	Percent
Cash-grain	91.1	84.2	81.5	85.9
Tobacco	31.4	73.9	80.2	83.5
Cotton	69.9	74.7	77.3	83.8
Other field crops	93.8	91.3	87.9	87.0
Vegetables 3/	84.9	81.7	80.9	80.4
Fruit and nut	94.4	94.2	94.1	93.0
Poultry	95.6	92.4	89.8	83.7
Dairy 4/	86.6	77.1	74.0	70.4
Other livestock farms and ranches	94.2	82.0	77.1	85.1

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
3/ The lower percentage is because many farms (especially in California) grow potatoes, sugarbeets, and other field crops not classified by Census as vegetables.
4/ If the sale of calves is added, the percentage would be over 90 percent.

Source: Derived from 1964 Census of Agriculture, Vol. 11, Ch. 10, tables 9-18 and Vol. II, Ch. 6, table 16.

Table 11.—Specified purchased inputs on farms with sales of $100,000 or more, and as a percentage of total for all farms, by specified size, 1959 and 1964 1/

Specified purchased inputs	1959 purchased inputs on farms with sales of $100,000 or more			1964 purchased inputs on farms with sales of $100,000 or more			1964 purchased inputs on farms with sales of $100,000 or more, by specified size, as a percentage of total for all farms			
	Total	Average per farm	As a percentage of purchased inputs of all farms	Total	Average per farm	As a percentage of purchased inputs of all farms	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Million dollars	Dollars	Percent	Million dollars	Dollars	Percent	Percent	Percent	Percent	Percent
Feed for livestock and poultry	737	36,889	15.5	1,576	50,189	28.7	8.7	3.6	7.3	9.0
Purchase of livestock and poultry	1,095	54,808	28.4	1,616	51,463	38.3	16.1	4.6	8.0	10.0
Machine hire	118	5,906	14.7	208	6,624	23.9	5.4	3.3	7.6	7.6
Hired labor	789	39,491	30.1	1,123	35,763	40.6	10.9	5.7	11.4	12.1
Seeds, bulbs, plants and trees	73	3,654	14.8	110	3,503	16.7	2.4	2.1	5.4	6.7
Fertilizer	102	5,105	8.5	276	8,790	15.6	3.4	1.8	4.3	6.0
Gasoline and other petroleum oil and fuel	116	5,806	7.5	194	6,178	10.9	1.6	1.1	3.2	5.0
Total	3,030	151,659	19.9	5,103	162,510	29.0	9.2	3.7	7.4	8.9

1/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1959 Census of Agriculture, Vol. V, Part 7, table 6; 1964 Census of Agriculture, Vol. II, Ch. 6, table 16; and a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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A large proportion of purchased inputs are made on farms with sales of $1 million or more. In 1964, these topscale farms accounted for 9 percent of all purchased feed, 16 percent of the value of all livestock and poultry bought alive, 11 percent of the hired labor wage bill, and 5 percent of all expenses for machine hire. Proportions of other purchased inputs by these farms were much smaller (table 11).

The value of purchased inputs as a proportion of gross sales of farm products is directly related to size of farm. In 1964, on medium-sized farms the value of specified purchased inputs amounted to 42 percent of the value of all farm products sold, on large farms, 48 percent, and on the largest farms, 60 percent.7/ The relatively high proportion of purchased inputs by small farms is due to special production conditions on many part-time and part-retirement farms. On farms with sales of $1 million or more, specified purchased inputs amounted to 68 percent of their total sales. This proportion was mostly due to increasing expenditure for purchased feed, livestock, and hired labor (table 12).

Hired Labor

In 1959, the farms with sales of $100,000 or more used about 390,000 man-years of hired labor--30 percent of total hired work used on all farms; in 1964, they used 440,000 man-years of hired labor--40 percent of all hired work. Furthermore, the concentration of hired labor on the largest farms and their dependence on that labor increases with size of farm. In 1964, the 919 farms with sales of $1 million or more accounted for 11 percent of the total hired labor bill on farms. These farms averaged 130 man-years of hired labor per farm. Included in the man-year estimate per farm were 86 regular workers with 150 days or more of work during 1 year (table 13).8/

A classification of all farms by their use of hired labor shows that an overwhelming majority of farms either do not employ hired labor at all or employ very little hired labor. Family labor is responsible for most of total farm production. In 1964, about 50 percent of all farms had no hired labor and accounted for about a fifth of all farm products sold. An additional 38 percent used less than one-half man-years of hired labor and had 30 percent of total farm marketings. Together, these farms without hired labor or with little hired labor constituted 88 percent of all farms and accounted for 50 percent of all farm products sold. However, not all farms used so little hired labor. As shown in table 13, use of hired labor increases directly with the size of farm. Only 2 percent of the largest farms had no hired labor, and accounted for 1 percent of all sales by the largest farms. But 21 percent had more than 15 man-years of hired labor and accounted for 43 percent of all sales by the largest farms (table 14).

7/ Specified purchased inputs are feed, livestock and poultry bought alive, machine hire, hired labor, seed, fertilizer, fuel, and oil.

8/ For the number of regular workers (working 150 days or more during one year) see table 28.

Table 12.--Specified purchased inputs as a percentage of total farm sales by size of farm, 1964

Item	Size of farm in value of sales								
	The largest					Large--	Medium--	Small--	All farms 1/
	Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	$20,000-$99,999	$5,000-$19,999	less than $5,000	
	Million dollars								
Total farm sales	8,539	2,367	1,067	2,253	2,852	13,588	10,267	2,754	35,148
	Purchases as a percentage of sales								
	Percent								
Purchased inputs as a percentage of sales:									
Feed for livestock and poultry	18.4	20.4	18.4	17.8	17.4	15.6	12.9	17.1	15.6
Livestock	17.2	27.5	16.5	12.8	12.4	11.8	6.8	9.0	11.9
Poultry	1.7	0.9	1.6	2.0	2.2				
Machine hire	2.4	2.0	2.7	2.9	2.3	2.0	2.6	4.1	2.4
Hired labor	13.2	12.9	15.0	14.2	11.9	7.5	4.7	5.2	7.9
Seeds, bulbs, plants, and trees	1.3	0.7	1.3	1.6	1.6	1.7	2.2	3.2	1.9
Fertilizer	3.2	2.6	3.0	3.4	3.7	5.1	5.6	8.1	5.0
Fuel and oil	2.3	1.2	1.9	2.5	3.1	4.5	6.8	10.3	5.1
Total	59.7	68.2	60.4	57.2	54.6	48.2	41.6	2/57.0	49.8

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ The relatively high proportion was due to the special organization of the many part-time and part-retirement units in this group.

Source: Derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census and from Vol. II, Ch. 6, table 15, of the 1964 Census of Agriculture.

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Table 13.--Wage bill by size of farm, all farms, 1964

Size of farm in value of sales	Farms	Wage bill		Estimated man-years of hired labor per farm 1/
		Value	Percentage of all farms	
	Number	Million dollars	Percent	Man-years
All farms	2/ 3,155,679	2/ 2,770	100.0	0.3
The largest:				
$1,000,000 or more	919	304	11.0	130.3
$500,000-$999,999	1,574	160	5.8	39.9
$200,000-$499,999	7,760	320	11.5	16.2
$100,000-$199,999	21,148	339	12.2	6.3
Total	31,401	1,123	40.5	14.1
Large:				
$20,000-$99,999	370,411	1,021	36.9	1.1
Medium:				
$5,000-$19,999	971,710	482	17.4	0.2
Small:				
Less than $5,000	1,782,157	144	5.2	---

1/ Man-years estimated by dividing the wage bill by the cost of one year of full time work by a male worker.

2/ Indian reservations, institutional farms, and other special farms are not included

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15, and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 14.--Farms and farm sales by size of farm and by man-years of hired labor, 1964

Man-years of hired labor	Percentage distribution of specified groups of farms 1/									
	All farms 2/		The largest		Large		Medium		Small	
	Number	Sales	Number	Sales	Number	Sales	Number	Sales	Number	Sales
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
None	49.8	19.4	2.1	1.3	15.7	13.6	35.0	32.6	65.9	54.4
Less than 0.5	38.0	30.5	3.9	2.2	35.4	30.6	50.3	50.4	32.5	42.6
0.5-0.9	4.9	8.3	3.3	1.9	13.2	12.6	8.5	9.4	1.2	2.3
1.0-1.4	2.6	6.5	5.7	3.3	10.9	11.4	3.5	4.2	0.3	0.5
1.5-2.4	2.1	7.3	10.5	6.3	11.3	12.9	2.0	2.5	0.1	0.2
2.5-4.9	1.5	8.2	20.7	13.7	9.1	12.0	0.6	0.8	3/	3/
5.0-6.9	0.4	3.3	11.2	8.2	2.2	3.3	0.1	0.1	3/	3/
7.0-9.9	0.3	2.9	10.8	8.8	1.2	2.0	3/	3/	3/	3/
10.0-14.9	0.2	3.0	11.0	10.9	0.6	1.1	3/	3/	3/	3/
15.0 and over	0.2	10.6	20.8	43.4	0.2	0.5	3/	3/	3/	3/
All farms	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
2/ Indian reservations, institutional farms, and other special farms are not included.
3/ Less than 0.05 percent.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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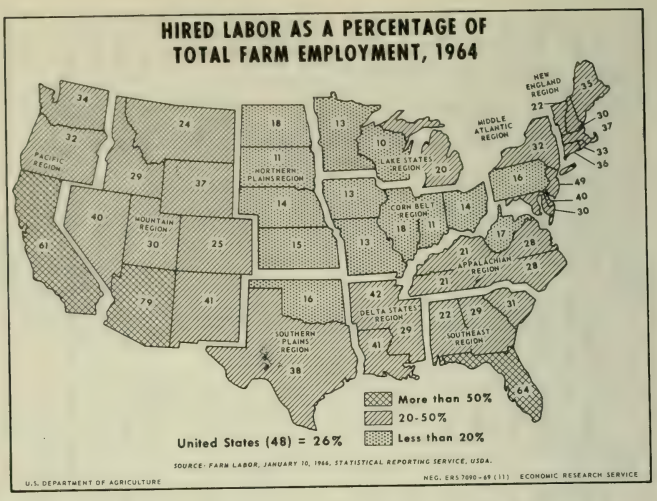

Figure 2

The greater use of hired labor on the largest farms accounts for, to a great extent, the differences between States in the number of workers hired. States where the largest farms were dominant were also States with greater proportions of hired labor on farms (fig. 2). For example, in Arizona, California, and Florida, the largest farms accounted for 78 percent, 69 percent, and 69 percent of all farm products sold. The States' proportions of hired labor employment on farms were 81 percent, 64 percent, and 69 percent. In the Corn Belt and Lake States regions, where the eonomic importance of the largest farms was quite modest, the proportion of hired labor employment on farms was, on the average, below 15 percent (fig. 2).9/

Farmland and Acreage Size

From 1959 to 1964, acreage of farmland increased noticeably on farms with sales of $20,000 or more (table 15). The increase, however, is due more to the expanding number of these farms than to an increase in their acreage. This explanation is reflected in the decreasing average acreage per farm. This decrease is reflected also in the fact that production on

9/ For a more comprehensive report on farm labor, see W.L. Sellers and T.E. Eichers, "Farm Labor Inputs," USDA, ERS, Statis. Bul. No. 438, June 1969.

Table 15.--Acreage and use of land, by size of farm, and as a percentage of total for all farms, 1959 and 1964

Size of farm in value of sales 1/	Farmland 2/				Acreage of farmland by specified uses					
	Acreage 3/		Acres per farm		Cropland		Woodland		Pastureland except cropland and woodland 4/	
	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964
	Million acres	Million acres	Acres	Acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres
The largest	114	121	5,686	3,854	21	29	9	8	80	80
Large	305	335	1,041	905	113	121	25	26	159	162
Medium	402	375	355	386	205	166	49	42	131	137
Small 5/	259	230	115	159	109	80	71	61	64	73
All farms	1,080	1,061	292	336	448	396	154	137	434	452
	Percentage of total for all farms									
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
The largest	10.6	11.4	---	---	4.7	7.3	5.9	5.8	18.4	17.7
Large	28.2	31.6	---	---	25.1	30.6	16.2	19.0	36.6	35.8
Medium	37.2	35.3	---	---	46.0	41.9	31.8	30.7	30.2	30.3
Small 5/	24.0	21.7	---	---	24.2	20.2	46.1	44.5	14.8	16.2
All farms	100.0	100.0	---	---	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999: medium--$5,000 through $19,999; and small--less than $5,000.
2/ Indian reservations, institutional and other special farms are not included.
3/ Acreage for farmland usage does not add to total acreage. The difference is accounted for by acres in houses, lots, roads, and wasteland, which are not included.
4/ Mostly grazing land.
5/ Operator households on these farms have, on the average, more nonfarm than farm income.

Source: 1959 Census of Agriculture, Vol. II, Ch. 11, table 5 and Vol. 5, part 7, table 6, and 1964 Census of Agriculture, Vol. II, Ch. 6, tables 15 and 16.

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many of the largest farms is increasingly less dependent on the land. Such decreasing dependence is true for farms with cattle feeding, broilers, other meat production, and egg production, as well as for dry-lot dairy establishments.

Farms with sales of $100,000 or more accounted for about 10 percent of total farmland in both 1959 and 1964. This proportion increased from 5 to 7 percent for cropland. The percentage did not change for woodland, and decreased slightly for grazing land (table 15).

Not many of the 31,401 largest farms are extremely large in acreage. About 60 percent have less than 1,000 acres, and 3 percent have less than 10 acres (app. table 14). The average acreage of the largest farms ranges from 2,770 to 12,121 acres, depending on their size in value or sales. However, the greater part of their acreage--ranging from about 60 to 70 percent, consists of grazing land; 20 to 28 percent is cropland; and 5 to 10 percent, woodland (table 16).

Farm Equipment

The largest farms do not account for a large percentage of farm equipment. In 1964, they accounted for 5 percent of all motortrucks on farms, 4 percent of all tractors other than garden tractors (but 14 percent of crawler tractors), and 3 percent of field forage harvesters (table 17).

However, merely counting numbers is an incomplete measurement. This kind of measure does not show the importance of such equipment on the largest farms. Their machines and equipment are larger and technically more efficient than those on other farms (table 28).

LAND TENURE ON THE LARGEST FARMS

The pattern of tenure under which farmland is operated--the land tenure--is not changing significantly, but this pattern differs by size of farm. However, the tenure under which farm operators are controlling their land--the tenure of farm operator--is changing more significantly, both over time and by size of farm.

Tenure Under Which Land Is Operated

All the technical and economic changes in farming do not appear to be altering the traditional land tenure pattern. 10/ From 1944 to 1964, the proportion of land operated under ownership, rental, and paid management did not change significantly. Throughout this period, about 55 percent of the land in farms was operated by owners, 35 percent, by renters, and about 10 percent, by paid managers (app. table 15).

On the farms with sales of $100,000 or more, the land tenure pattern differs slightly--with less land under ownership and more under rental and paid management. A difference in land tenure depending on the size

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10/ We are speaking here of the tenure under which farmland is operated, disregarding the composition of operating units. For example, in a part-owner farm, part of the land is owned by the operator, and another part is rented.

Table 16.--Amount and specified use of farmland on farms with sales of $100,000 or more, 1964

Size of farm in value of sales	Farms	Farmland		Average acreage per farm	Percentage of farmland in-- 1/		
		Amount	As percentage of U.S. total		Cropland	Woodland	Pastureland except cropland and woodland 2/
	Number	1,000 acres	Percent	Acres	Percent	Percent	Percent
$1,000,000 or more...	919	11,139	1.0	12,121	27.6	4.5	61.8
$500,000-$999,999...	1,574	13,162	1.2	8,362	19.7	9.8	68.0
$200,000-$499,999...	7,760	38,130	3.4	4,914	21.1	5.9	70.6
$100,000-$199,999...	21,148	58,590	5.3	2,770	26.0	7.4	64.4
Total.....	31,401	121,021	10.9	3,854	23.9	6.9	66.5

1/ Acreage for farmland usage does not add to 100 percent. The difference is accounted for by acres in houses, lots, roads, and wasteland, which are not included.
2/ Mostly grazing land.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 17.--Farm equipment on farms with sales of $100,000 or more as a percentage of specified equipment on all farms, by specified size, 1964

Farm equipment	All farms	Farms with sales of $100,000 or more				
		Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Thousands	Percent	Percent	Percent	Percent	Percent
Motortrucks.....	3,030	4.8	0.6	0.5	1.3	2.4
Tractors excluding garden.....	4,787	3.8	0.3	0.3	1.1	2.1
Crawler tractors.....	186	13.8	2.4	1.4	4.2	5.8
Wheel tractors.....	4,601	3.4	0.2	0.3	1.0	1.9
Grain combines.....	910	2.3	0.1	0.1	0.6	1.5
Cornpickers.....	690	1.2	NA	NA	NA	NA
Pickup balers.....	751	1.5	NA	NA	NA	NA
Field forage harvesters.....	316	3.4	NA	NA	NA	NA

NA = Not available.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

of the largest farms is noticeable on farms with sales of $500,000 to $999,999. Both the proportions of land under ownership and rental were smaller--46 percent and 30 percent--and the proportion of land under paid management was the largest--24 percent (table 18).

Tenure of Farm Operators

The proportion of farms operated by tenants decreased from 1959 to 1964, and the proportion operated by part owners increased. The proportion operated by full owners and paid managers did not change much. On the largest farms, the percentage operated by full and part owners increased slightly, and the percentage operated by tenants and paid managers decreased slightly.

However, the tenure of farm operators differs greatly by size of farm. In 1964, the pattern of these differences was clearly outlined. The proportion of farms operated by full owners and tenants decreased as the size of farm increased. The proportion of part owners, on the contrary, increased until the size of farm with sales of $200,000 was reached, but decreased on farms above that size. The proportion of farms under paid management increased from 0.4 percent of all medium-sized farms to 45 percent of all farms with sales of $1 million or more (table 19). 11/

OPERATORS ON THE LARGEST FARMS

The characteristics of operators on the largest farms differ from those of operators on smaller farms. Operators of the largest farms tend to be less involved in off-farmwork, to rely more on farm income, but a larger proportion of them do not reside on the farm. They do not differ much by age, but have a higher educational attainment than operators of smaller farms.

Off-Farmwork

The percentage of operators reporting off-farmwork has not changed much in recent years. It was 45 percent in 1959 and 46 percent in 1964. The proportion of operators reporting 200 or more days of off-farmwork increased from 24 to 26 percent during that period. However, the percentage of operators reporting off-farmwork is lower on larger farms. This is especially true for operators reporting 200 or more days of off-farmwork.

In 1964, on medium-sized farms, about 36 percent of all operators reported off-farmwork, and 12 percent reported 200 or more days of such work. On the largest farms, these proportions were 16 and 8 percent (table 20).

Operators' off-farmwork is practically all in nonfarm jobs. A small amount of work was done by farmers on farms other than their own.

11/ Because of the special structure of their many residential farms, full owners predominated on small farms. This fact greatly biases their comparability with other farms.

Table 18.--Tenure under which farmland is operated on farms with sales of $100,000 or more, 1964

Size of farm in value of sales	Total farmland acreage	Percentage of farmland operated under--		
		Ownership	Rental	Paid management
	Million acres	Percent		
All farms with sales of:				
$100,000 or more	121	49	39	12
$1,000,000 or more	11	51	36	13
$500,000-$999,999	13	46	30	24
$200,000-$499,999	38	48	41	11
$100,000-$199,999	59	50	40	10

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

On all sizes of farms, nonfarm jobs accounted for more than 90 percent of total work done by operators outside their farms (table 21).

The percentage of operators reporting off-farm jobs on the largest farms and the time they spent on those jobs differs by State. However, in all States, operators on larger farms tend to spend less time on off-farm jobs than do operators on smaller farms.12/

Off-Farm Income

Dependence of the farm population on off-farm income is not a new development, but from 1947 to 1967, this dependence increased. Income from off-farm sources in the first few years after World War II accounted for about 32 percent of total personal income of the farm population; in 1967, such income was estimated to have accounted for 42 percent.13/

The importance of income from off-farm sources declines as the size of farm increases. Thus, in 1964, on small farms, 89 percent of the operators reported household off-farm income; on medium-sized farms,

12/ For more detailed information on the nonfarmwork of operators of farms with sales of $100,000 or more, see app. table 16; for operators of all farms and members of their households, see app. table 17.
13/ USDA, ERS, Farm Income Situation 211, July 1968, table 5H, p. 48.

Table 19.--Percentage distribution of farms by tenure of farm operators for all farms, by size of farm, 1959 and 1964

Tenure of farm operators	Farms with sales of $100,000 or more						Farms with sales less than $100,000, 1964 1/		
	1959	1964							
	Total	Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	Large	Medium	Small
	Percent								
Full owners	29.9	30.1	18.8	25.7	29.6	31.1	29.7	41.6	72.5
Part owners	44.4	45.4	30.3	35.6	43.6	47.5	46.2	35.2	14.3
Managers	13.1	12.0	44.9	29.1	16.3	7.7	1.6	0.4	0.2
Tenants	12.6	12.5	6.0	9.6	10.5	13.7	22.5	22.8	13.0
All farm operators	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: Data derived from the 1959 Census of Agriculture, Vol. 5, part 7, table 6; the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15; and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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amount of off-farmwork, by size of farm, 1964

Size of farm in value of sales 1/	Operators reporting off-farmwork-- 1-99 days	100-199 days	200 days and over	Total days	Operators reporting "none" or not reporting	All operators
	Number					
The largest:						
$1,000,000 or more	28	17	87	132	787	919
$500,000-$999,999	55	28	161	244	1,330	1,574
$200,000-$499,999	359	150	687	1,196	6,564	7,760
$100,000-$199,999	1,486	440	1,565	3,491	17,657	21,148
Total	1,928	635	2,500	5,063	26,338	31,401
Large	61,112	10,900	22,450	94,462	275,949	370,411
Medium	182,317	51,375	114,486	348,178	623,532	971,710
Small	203,529	126,064	684,389	1,013,982	768,175	1,782,157
Total 2/	448,886	188,974	823,825	1,461,685	1,693,994	3,155,679
	Number as a percentage of all operators					
	Percent					
The largest:						
$1,000,000 or more	3.0	1.9	9.5	14.4	85.6	100.0
$500,000-$999,999	3.5	1.8	10.2	15.5	84.5	100.0
$200,000-$499,999	4.6	1.9	8.9	15.4	84.6	100.0
$100,000-$199,999	7.0	2.1	7.4	16.5	83.5	100.0
Total	6.1	2.0	8.0	16.1	83.9	100.0
Large	16.5	2.9	6.1	25.5	74.5	100.0
Medium	18.7	5.3	11.8	35.8	64.2	100.0
Small	11.4	7.1	38.4	56.9	43.1	100.0
Total 2/	14.2	6.0	26.1	46.3	53.7	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ Indian reservations, institutional farms, and other special farms are not included.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census, and from the 1964 Census of Agriculture, Vol. II.

Table 21.--Amount and percentage distribution of operators off-farmwork on nonfarm jobs, by size of farm, 1964

Days worked	All farms 1/	Size of farm 2/			
		Largest	Large	Medium	Small
	Days				
On another farm	10,357,458	28,343	638,338	2,479,906	7,210,871
At nonfarm jobs	239,450,675	720,135	8,385,713	39,927,779	190,417,048
Total	249,808,133	748,478	9,024,051	42,407,685	197,627,919
	Percent				
On another farm	4.1	3.8	7.1	5.8	3.6
At nonfarm jobs	95.9	96.2	92.9	94.2	96.4
Total	100.0	100.0	100.0	100.0	100.0

1/ Indian reservations, institutional farms, and other special farms are not included.

2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: 1964 Census of Agriculture, Vol. II, Ch. 6, tables 15 and 16.

74 percent; on large farms, 67 percent; and on the largest farms, only 57 percent.

Differences in the importance of off-farm income, depending on the size of farm, can be indicated by comparing off-farm income with farm marketings. Off-farm income seems to be by far the main source of livelihood for families living on small farms. This proportion is due mostly to the large number of part-time and part-retirement units among small farms. Off-farm income equalled 23 percent of farm marketings on medium-sized farms, 7 percent on large farms, and less than 2 percent on the largest farms (table 22). The significance of off-farm income, however, is greater than that indicated by its comparison with farm marketings. Usually, off-farm income is more nearly net income than that from sales of farm products.

Sources of off-farm income for all members of operators' households also vary by size of farm. The main sources of off-farm income on medium- and small-sized farms are wages and salaries from nonfarm jobs. Off-farm income on larger farms comes primarily from Government payments, rent of farm and nonfarm property, interest, dividends, and similar sources (app. table 18).14/

14/ For more information, see 1964 Census of Agriculture, Vol. 3, part 3, table 6, p. 22.

Table 22.--Off-farm income of all persons in farm operator households as a percentage of farm sales, by size of farm, 1964

Size of farm in value of sales 1/	Operator households: Total	Operator households: Percentage reporting off-farm income	Farm sales	Off-farm income of operator households	Off-farm income as a percentage of farm sales
	Number	Percent	1,000 dollars	1,000 dollars	Percent
Largest	31,401	57.4	8,538,811	146,033	1.7
Large	370,411	67.4	13,587,753	986,305	7.3
Medium	971,710	73.8	10,267,240	2,392,922	23.3
Small	1,782,157	88.5	2,753,891	6,522,434	2/236.8
All farms 3/	3,155,679	81.2	35,147,695	10,047,694	28.6

1/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
2/ The high off-farm income percentage of farm sales is due to the great number of part-time and residential farms that had only insignificant farm production.
3/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1964 Census of Agriculture General Report, Vol. II, Ch. 6, tables 15 and 16, pp. 642 and 658.

Off-farm income of operators' households varies by States. For all operators and for operators only on the largest farms, such income generally tends to be smaller in the Middle Atlantic, Lake States, and Corn Belt regions than in the rest of the country and to be largest in the Southern Plains (app. tables 17 and 19).

Residence on Farm

Higher specialization of farm production and greatly extended transportation facilities have increasingly enabled farmers to live away from their farms all or most of the year. The proportion of farmers living on their farms has decreased in recent decades. In 1950, 95 percent of all farm operators lived on farms; in 1964, this proportion was 90.5 percent.15/

The proportion of operators residing on farms was lower on larger farms. While this proportion was 76 percent on farms with sales of $100,000 to $199,999, it was only 42 percent on farms with sales of $1 million or more (table 23).

For the largest farms in their individual groups, no data are available by State on the operator's farm residence. But an analysis of the largest farms as a whole shows that the proportion of farmers not residing

15/ 1964 Census of Agriculture, Vol. 2, Ch. 5, p. 513.

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Table 23.--Operators on farms with sales of $100,000 or more reporting residence on or off their farms, 1964

Size of farm in value of sales	Operators reporting as to residence on farm		Operators not reporting	Operators reporting residence on farm as percentage of operators reporting
	Not on farm	On farm		
	Number	Number	Number	Percent
$1,000,000 or more.....	473	340	106	41.8
$500,000-$999,999.....	711	751	112	51.4
$200,000-$499,999.....	2,562	4,885	313	65.6
$100,000-$199,999.....	4,866	15,717	565	76.4
Total.....	8,612	21,693	1,096	71.6
U.S. total.....	290,971	2,773,815	93,071	90.5

Source: Derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

on farms differs greatly by State. For example, in 1964, farmers not residing on their farms accounted for 6 percent of all farm operators in Iowa, 17 percent in California, and more than 24 percent in Florida (fig. 3).

Age of Operator

Except for small farms, no significant difference is found in the age of farm operators by size of farm. In 1964, the average age on small farms was 52 years. This relatively high age is due to the absence of young and middle-aged farmers on these units. More than half the operators on small farms were over 55, and among these, 360,000 were part-retired, with an average age of 71 years.16/ The average age for other sizes of farms ranged from 46 on large farms to 49 on farms with sales of $1 million or more. Farm operators between 35 and 54 accounted for the bulk of farmers on all sizes of farms, except on small units. On the largest farms, the proportions of farmers under 25 and over 55 was somewhat smaller than on medium-sized farms (table 24).

The average age of operators on the largest farms differs slightly by type of farm. In 1964, the age was lowest (46) on the largest cash-grain, cotton, and poultry farms and the largest livestock ranches, and highest (50) on the largest fruit, livestock (other than poultry and dairy), and miscellaneous farms (table 25).

16/ R. Nikolitch, "A Comparison of Age Levels of Farmers and Other Self-Employed Persons," USDA, ERS, Agr. Econ. Rpt. No. 125, Nov. 1967.

Table 24.--Number and percentage distribution of farm operators, by age and by size of farm, 1964 1/

Age of operator	Size of farm in value of sales							
	The largest					Large--	Medium--	Small--
	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	Total	$20,000-$99,999	$5,000-$19,999	Less than $5,000
	Number							
All farm operators	919	1,574	7,760	21,148	31,401	370,411	971,710	1,782,157
Operators by age:								
Under 25	4	5	41	147	197	5,301	19,239	28,433
25-34	60	122	768	2,472	3,422	52,541	109,628	143,390
35-44	243	467	2,308	6,392	9,410	110,546	223,874	309,148
45-54	319	518	2,518	6,623	9,978	113,919	294,218	432,525
55-64	226	306	1,466	3,965	5,963	65,816	233,627	436,383
65 and over	67	156	659	1,549	2,431	22,288	91,124	432,278
Average age 2/	49	48	47	47	47	46	48	52
	Percent							
All farm operators	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operators by age:								
Under 25	0.4	0.3	0.5	0.7	0.6	1.4	2.0	1.6
25-34	6.5	7.8	9.9	11.7	10.9	14.2	11.3	8.0
35-44	26.5	29.7	29.7	30.2	30.0	29.8	23.0	17.3
45-54	34.7	32.9	32.5	31.3	31.8	30.8	30.3	24.3
55-64	24.6	19.4	18.9	18.8	19.0	17.8	24.0	24.5
65 and over	7.3	9.9	8.5	7.3	7.7	6.0	9.4	24.3

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Estimated on the basis of data on distribution.

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15 and from a special tabulation of the 1964 Census of Agriculture, made available by Bur. of Census.

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Table 25.--Estimated average age of farm operators on farms with sales of $100,000 or more, by type of farm, 1964

Type of farm	Average age of operator
Cash-grain	46
Tobacco	49
Cotton	46
Other field crops	47
Vegetable	47
Fruit and nut	50
Poultry	46
Dairy	47
Livestock ranches	46
Other livestock	50
General	47
Miscellaneous	50

Source: Estimated on the basis of data on distribution of operators by age, 1964 Census of Agriculture, Vol. 2, Ch. 6, table 16, pp. 656 and 657.

The average age of farm operators on farms with sales of $100,000 or more differs also by State and region. The age is highest in New England, West Virginia, Wyoming, Florida, Montana, and Hawaii, and lowest in the Lake States, Corn Belt, and Northern Plains (fig. 4).17/

Educational Attainment

Farmers' educational attainment seems to be related to farm size. The proportion of operators with education is greatest on smaller farms. In 1964, operators with 8 years of school or less accounted for 56 percent of all operators on small farms, 45 percent on medium-sized farms, and 28 percent on large farms, but only 20 percent on the largest farms. On the other hand, operators with 4 years of college accounted for 4 percent of all operators on both small and medium-sized farms and 7 percent on large farms, but 17 percent on the largest farms (table 26).

In 1964, the average level of schooling for all farmers was 11 years for operators under 35, 10.2 for operators between 35 and 44, 9.4 years for those between 45 and 54, 8.7 for those between 55 and 64, and 8.1 for operators 65 and over. But the fact that younger farmers had more education could not explain that those working on farms above the medium-size had the highest educational attainment. As shown in table 24, operators on larger farms are not younger than those on smaller farms. Neither could a comparison by States, age, and educational attainment of operators on commercial farms explain the difference in educational attainment (app. table 20).

17/ For regional differences in average age of operators, see app. table 48.

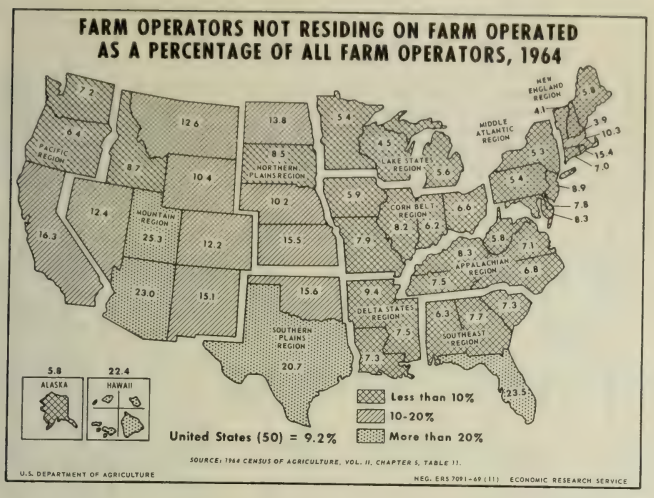

Figure 3

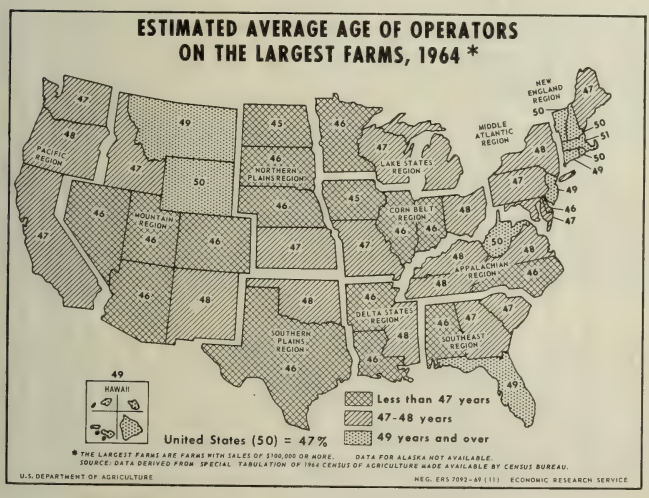

Figure 4

Table 26.--Number and percentage distribution of farm operators of all farms by size of farm and by highest grade of school completed, 1964

Highest grade of school completed	Operators on all farms 1/		Operators by size of farm 2/							
			The largest		Large		Medium		Small	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
All operators	3,155,679	100.0	31,401	100.0	370,411	100.0	971,710	100.0	1,782,157	100.0
Elementary school:										
0-4 years	225,130	7.1	498	1.6	5,927	1.6	36,925	3.8	181,780	10.2
5-7 years	465,550	14.8	1,784	5.7	22,965	6.2	103,973	10.7	336,828	18.9
8 years	851,131	26.9	4,123	13.1	73,341	19.8	292,485	30.1	481,182	27.0
High school:										
1-3 years	535,507	17.0	4,541	14.5	62,970	17.0	163,247	16.8	304,749	17.1
4 years	762,110	24.2	10,438	33.2	142,608	38.5	284,711	29.3	324,353	18.2
College:										
1-3 years	178,833	5.6	4,796	15.3	36,671	9.9	55,387	5.7	81,979	4.6
4 years	137,418	4.4	5,221	16.6	25,929	7.0	34,982	3.6	71,286	4.0
Average grade completed	9.4		11.5		10.7		9.7		8.8	

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: Derived from the 1964 Census of Agriculture Vol. II, Ch. 6, tables 15 and 16. Figures on large, medium, and small farms were adjusted to add to the total number of all operators in each size-group of farms.

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FAMILY FARMS

Though the total number of farms was reduced markedly from 1949 to 1964, the proportion that were family farms remained about the same in that period, and their share of marketings changed little. 18/ In 1964, family farms accounted for 95 percent of all farms and 64 percent of the value of all farm products sold. Measured in constant dollars, these proportions were 95 and 69 percent in 1959, and 95 and 63 percent in 1949.

An analysis by size of farm from 1959 to 1964 shows that the proportions of family farms and their marketings increased for all farm sizes, including the largest farms. In 1959, 11 percent of these farms were family farms, accounting for 7 percent of total sales of the largest farms. In 1964, 14.5 percent of the largest farms were family farms, accounting for 8.4 percent of total sales by the largest farms.

The proportions of the number and sales of family-operated farms did not change significantly on small-sized farms. Large family farms expanded considerably from 1959 to 1964 (table 27).

The economic importance of family farms varies greatly by State and region. Family farms are most dominant in the North Central part of the country, as well as in some of the Middle Atlantic and South Central States. In California, Texas, Florida, and a few other States, on the contrary, family farms provide less than half of total farm sales (app. table 21).

The importance of family farms among the largest farms also varies greatly by State. This pattern generally follows the pattern of State and regional differences for all family-operated farms (see app. table 21). Thus, in Iowa, where family-operated units accounted for 91 percent of all farm marketings in 1964, family-operated farms provided more than 45 percent of total marketings by the largest farms. In California, on the contrary, where family-operated units accounted for only 21 percent of all farm marketings, family-operated units accounted for less than 4 percent of total marketings by the largest farms (fig. 5).

Rapid increases in farm technology have increased the quantity of land and other inputs a man can handle per unit of time. In turn, technological changes have greatly expanded the size of a farm business that can be operated by a family. The economic importance of family-operated units among the largest farms, in the greater part of the United States, indicates the capacity of operators to adjust their family operations to large-scale farming.

18/ The essential characteristic of a family farm is not found in the size of its sales, acreage, or capital investment, but in the degree to which productive effort and its reward are vested in the family. The family farm is an agricultural business in which the operator is a risk-taking manager who, with his family, does more than half of the farm work. Statistical information on hired labor is ample and adequate, but very little data is available on operator and family labor. However, the family labor supply on the average farm is estimated to be about 1.5 man-years. To have a convenient working definition, we classify farms not using hired management and using less than 1.5 man-years of hired labor as family farms, and those using more than 1.5 man-years of hired labor or hired management or both as larger-than-family farms.

Table 27.—Number and sales of family farms and larger-than-family farms as a percentage of total for all farms, by size of farm, 1959 and 1964 1/

Size of farm 2/	Number of farms as a percentage of total		Sales as a percentage of total	
	Family farms 3/	Larger-than-family farms 3/	Family farms 3/	Larger-than-family farms 3/
	Percent			
1959:				
Largest	10.8	89.2	7.0	93.0
Large	68.0	32.0	60.8	39.2
Medium	95.8	4.2	94.3	5.7
Small	99.7	0.3	99.5	0.5
Total	95.5	4.5	69.6	30.4
1964:				
Largest	14.5	85.5	8.4	91.6
Large	74.8	25.2	67.9	32.1
Medium	97.0	3.0	96.5	3.5
Small	99.8	0.2	99.7	0.3
Total	95.1	4.9	64.6	35.4

1/ Alaska and Hawaii are not included. Indian reservations, institutional farms, and other special farms are also not included.
2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
3/ For definition, see text, footnote 18.

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

EFFICIENCY ON THE LARGEST FARMS

Studies and information are lacking on the economic and technical efficiency of the largest farms. However, information from the 1964 Census of Agriculture would suggest a greater technical efficiency on these farms. Thus, we find on the largest farms a greater use of fertilizers, as well as a greater yield of production per animal and crops per acre (table 28).

Table 28.--Physical efficiency measures on farms, by size of farm, 1964

Physical efficiency measure	Unit	All commercial farms	Size of farm in value of sales				
			Total, $100,000 or more	$100,000-$199,999	$200,000-$499,999	$500,000-$999,999	$1,000,000 or more
Cropland harvested per tractor (other than garden tractors)	Acres	68	113	110	110	116	142
Corn harvested per cornpicker	do.	80	204	NA	NA	NA	NA
Hay harvested per pickup baler	Tons	170	901	NA	NA	NA	NA
Regular hired workers per farm	Number	3	10	5	12	29	86
Percentage of farms reporting use of:							
Commercial fertilizer	Percent	75.6	77.9	78.6	77.5	76.2	69.0
Wheel tractors	do.	83.9	92.9	92.2	93.8	95.2	96.0
Crawler tractors	do.	5.6	35.8	30.0	44.5	54.2	66.2
Combines (grain and bean)	do.	35.6	36.7	40.1	32.0	23.6	18.2
Motortrucks (including pickups)	do.	74.8	95.2	94.5	96.2	97.6	98.3
Fertilizer used per acre fertilized	Pounds	306	460	370	448	561	689
Value of products sold:							
Milk and cream per milk cow	Dollars	328	560	NA	NA	NA	NA
Eggs per chicken 4 months old and over	do.	4.39	5.39	NA	NA	NA	NA
Vegetables per acre	do.	301	447	325	360	503	681
Nursery products per acre	do.	NA	1,635	1,742	1,590	1,729	1,491
Yield per acre:							
Corn harvested for grain	Bushels	63	78	NA	NA	NA	NA
Soybeans harvested for beans	do.	23	22	22	21	22	24
Wheat	do.	25	31	NA	NA	NA	NA
Alfalfa harvested for hay or dehydrating	Tons	2.5	4.4	4.0	4.6	4.9	5.3
Clover and timothy hay	do.	1.5	1.6	1.6	1.6	1.4	2.0
Irish potatoes	Bushels	317	362	NA	NA	NA	NA
Cotton	Bales	1.1	1.7	1.5	1.8	1.9	2.6
Sugarbeets	Tons	NA	19.9	19.0	20.4	20.5	20.8

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census, and from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15.

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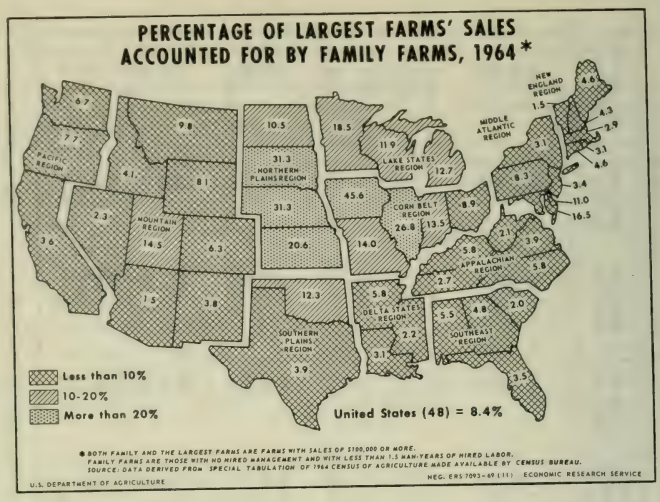

Figure 5

CONCLUSIONS

The information and analysis presented in this report do not fully answer questions raised in the introduction about the future of the largest farms.

However, the information and analysis presented do indicate that large-scale farming has still not extensively penetrated the organization of our farm production. Nonetheless, in some types of production and in some regions, this penetration has been considerable.

As for the future, empirical observation does not indicate any conclusive trend particular to the largest farms. They are increasing in size and number, as do all other adequately sized groups of farms under the impacts of new technological, economic, and social developments.

In the general race toward larger business size, the number of farms with sales of $100,000 or more probably reached 40,000 in 1969, and their gross sales accounted for at least one-third of total sales by all farms. Such expansion of large-scale farming is believed to be centering in about the same geographic areas, and in the same kinds of crop and livestock production as indicated by data in this report.

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APPENDIX

Appendix table 1.--Farm and interfarm sales, and interfarm sales as a percentage of all farm sales, by size of farm, 1964 1/

Size of farm in value of sales	Number of farms	Farm sales		Interfarm sales		Interfarm sales as a percentage of all farm sales
		Total	Per farm 2/	Total	Per farm 2/	
	Thousands	Million dollars	1,000 dollars	Million dollars	1,000 dollars	Percent
The largest farms:						
$1,000,000 or more	1	2,367	2,576	854	929	36
$500,000-$999,999	1	1,067	678	280	178	26
$200,000-$499,999	8	2,253	290	521	67	23
$100,000-$199,999	21	2,852	135	646	31	23
Total	31	8,539	272	2,301	73	27
Large:						
$40,000-$99,999	111	6,474	59	1,368	12	21
$20,000-$39,999	260	7,114	27	1,259	5	18
Medium:						
$10,000-$19,999	467	6,614	14	939	2	14
$5,000-$9,999	505	3,653	7	473	1	13
Small:						
$2,500-$4,999	444	1,611	4	218	4/	14
Less than $2,500	1,338	1,143	1	287	4/	25
Abnormal 3/	2	146	67	21	10	15
All farms	3,158	35,294	11	6,866	2	19

1/ Estimated by assuming that of the total value of all feed bought by farmers, 50 percent was accounted for by interfarm sales; of the total value of all seed bought, 53 percent was accounted for by interfarm sales; and 90 percent of all livestock bought by farmers was through interfarm trade.
2/ Averages computed before figures were rounded.
3/ Abnormal farms are Indian reservations, institutional farms, and other special farms.
4/ Sales less than $500.

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6 and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 2.--Estimated number and value of all cattle slaughtered and of cattle marketed from feedlots of 1,000 head or more, and estimated value of net agricultural output on feedlots with 1,000 head or more, 1962-64

Year	All cattle slaughtered		Cattle marketed from feedlots of 1,000 head or more			Net agricultural output on feedlots with 1,000 head or more 4/	
	Number 1/	Value 2/	Number 3/	Value 2/	Value as a percentage of value of all cattle slaughtered	Value	Value as a percentage of value of all cattle slaughtered
	1,000 head	Million dollars	1,000 head	Million dollars	Percent	Million dollars	Percent
1962.....	26,905	6,181	5,316	1,221	19.8	89.1	7.3
1963.....	28,604	6,040	5,840	1,257	20.8	91.8	7.3
1964.....	31,666	6,341	6,740	1,350	20.0	98.6	7.3

1/ As reported in 1965 supplement to Stat. Bul. 333, U.S. Dept. Agr., Aug. 1966, table 86, p. 64.
2/ Estimated on the basis of average weight and average price for slaughtered cattle, as reported in 1965 supplement to Stat. Bul. 333, U.S. Dept. Agr., Aug. 1966, table 120, p. 86 and table 15a, p. 108.
3/ Based on 28 States as reported in "Number of cattle on feedlots, 1962-1964," SRS-9, U.S. Dept. Agr., June 1966.
4/ Net agricultural output equals here the price of slaughtered cattle minus the value of purchased feeder steers and feed cost. Derived from an illustrative estimation by Econ. Res. Serv., Livestock and Meat Situation-145, U.S. Dept. Agr., Oct. 1965, p. 38.

Appendix table 3.--Number and sales of farms with sales of $100,000 or more, specified size, and by geographic region, 1964

Size of farm in value of sales	North			South			West			Percentage of farms by region		
	Farms	Total sales	Sales per farm	Farms	Total sales	Sales per farm	Farms	Total sales	Sales per farm	North	South	West
	Number	Billion dollars	1,000 dollars	Number	Billion dollars	1,000 dollars	Number	Billion dollars	1,000 dollars	Percent		
$1,000,000 or more...	166	.4	2,155.6	229	.5	2,375.4	524	1.5	2,796.3	18	25	57
$500,000-$999,999....	369	.3	668.6	478	.3	679.4	727	.5	681.2	24	30	46
$200,000-$499,999....	2,043	.5	282.9	2,485	.7	289.6	3,232	1.0	295.6	26	32	42
$100,000-$199,999....	7,106	.9	133.2	7,129	1.0	134.0	6,913	.9	137.5	33	34	33
Total.....	9,684	2.1	219.8	10,321	2.5	246.4	11,396	3.9	339.3	31	33	36

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 4.—Average value of farm products sold by farms with sales of $100,000 or more, by State, 1964

Region and State	Average value of farm products sold	Region and State	Average value of farm products sold
	1,000 dollars		1,000 dollars
New England:		Southeast:	
Maine	178	South Carolina	180
New Hampshire	197	Georgia	215
Vermont	185	Florida	406
Massachusetts	251	Alabama	199
Rhode Island	198		
Connecticut	341	Delta States:	
		Mississippi	202
Middle Atlantic:		Arkansas	189
New York	202	Louisiana	177
New Jersey	212		
Pennsylvania	214	Southern Plains:	
Delaware	225	Oklahoma	300
Maryland	197	Texas	248
Lake States:		Mountain:	
Michigan	180	Montana	212
Wisconsin	217	Idaho	281
Minnesota	201	Wyoming	195
		Colorado	382
Corn Belt:		New Mexico	284
Ohio	207	Arizona	436
Indiana	207	Utah	251
Illinois	181	Nevada	248
Iowa	181		
Missouri	197	Pacific:	
		Washington	256
Northern Plains:		Oregon	224
North Dakota	195	California	342
South Dakota	225	Alaska	1/
Nebraska	304	Hawaii	1,227
Kansas	319		
Appalachian:			
Virginia	220		
West Virginia	244		
North Carolina	195		
Kentucky	233		
Tennessee	203		

1/ Data for Alaska included in Washington to avoid disclosure of individual operations.

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Appendix table 5.--Number and sales of farms with sales of $100,000 or more, by specified size and their percentage of total farms in each size group, by type of farm, 1964

Type of farm	Value of sales									
	Total, $100,000 or more		$1,000,000 and over		$500,000-$999,999		$200,000-$499,999		$100,000-$199,999	
	Farms	Sales	Farms	Sales	Farms	Sales	Farms	Sales	Farms	Sales
	Number	Million 1/ dollars	Number	Million dollars	Number	Million dollars	Number	Million dollars	Number	Million dollars
Cash-grain	2,141	351.6	5	7.4	29	19.0	345	96.5	1,762	228.7
Tobacco	102	44.2	11	23.9	7	4.8	27	7.8	57	7.7
Cotton	3,465	762.1	36	111.2	112	74.7	847	242.8	2,470	333.4
Other field crops	2,237	633.2	68	208.0	83	56.5	560	160.3	1,526	208.4
Vegetables	1,590	574.5	94	195.5	158	109.3	521	157.2	817	112.5
Fruit and nut	2,511	753.7	93	215.4	168	113.8	711	212.9	1,539	211.6
Poultry	4,744	1,108.8	89	165.8	224	153.2	1,212	354.2	3,219	435.6
Dairy	2,576	529.7	19	37.5	93	65.2	609	174.2	1,855	252.8
Livestock (other than poultry and dairy farms and livestock ranches)	6,692	2,223.5	322	948.2	368	250.9	1,436	413.2	4,566	611.2
Livestock ranches	1,815	655.3	81	277.7	117	80.0	485	145.0	1,132	152.6
General	1,884	480.1	53	105.6	90	59.7	504	145.9	1,237	168.9
Miscellaneous	1,644	422.1	48	70.8	125	79.6	503	142.8	968	128.9
Total	31,401	8,538.8	919	2,367.0	1,574	1,066.7	7,760	2,252.8	21,148	2,852.3
	Number and sales as a percentage of total farms in each size group									
Cash-grain	6.8	4.1	0.5	0.3	1.9	1.8	4.4	4.3	8.3	8.0
Tobacco	0.3	0.5	1.2	1.0	0.4	0.4	0.3	0.4	0.3	0.3
Cotton	11.1	8.9	3.9	4.7	7.1	7.0	10.9	10.8	11.7	11.7
Other field crops	7.1	7.4	7.4	8.8	5.3	5.3	7.2	7.1	7.2	7.3
Vegetables	5.1	6.7	10.2	8.3	10.1	10.2	6.7	7.0	3.9	3.9
Fruit and nut	8.0	8.8	10.2	9.1	10.7	10.7	9.2	9.5	7.3	7.4
Poultry	15.1	13.0	9.7	7.0	14.2	14.4	15.6	15.7	15.2	15.3
Dairy	8.2	6.2	2.1	1.6	5.9	6.1	7.9	7.7	8.8	8.9
Livestock (other than poultry and dairy farms and livestock ranches)	21.3	26.1	35.0	40.0	23.4	23.5	18.5	18.3	21.6	21.4
Livestock ranches	5.8	7.7	8.8	11.7	7.4	7.5	6.3	6.4	5.3	5.4
General	6.0	5.6	5.8	4.5	5.7	5.6	6.5	6.5	5.8	5.9
Miscellaneous	5.2	5.0	5.2	3.0	7.9	7.5	6.5	6.3	4.6	4.5

1/ Total includes sales of recreation facilities.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 6.--Number of farms with sales of $100,000 or more, and their percentage of all farms, by type of farm, 1929, 1959, and 1964

Type of farm	Number of farms			As a percentage of 1959 total			As a percentage of all farms	
	1929	1959	1964	1929	1959	1964	1959	1964
	No.	No.	No.	Pct.	Pct.	Pct.	Pct.	Pct.
Cash-grain	100	1,179	2,141	8	100	182	0.3	0.4
Tobacco	54	68	102	79	100	150	1/	1/
Cotton	102	2,990	3,465	3	100	116	1.2	1.7
Other field crops	142	888	2,237	16	100	252	2.3	5.4
Vegetable	231	1,049	1,590	22	100	152	4.8	4.5
Fruit and nuts	376	1,693	2,511	22	100	148	2.8	2.9
Poultry	43	2,000	4,744	2	100	237	1.9	4.5
Dairy	200	1,755	2,576	11	100	147	.4	.6
Livestock (other than dairy and poultry)	1,081	6,156	8,507	18	100	138	.9	.9
General	12	931	1,884	1	100	202	.4	.7
All other	79	1,270	1,644	6	100	129	.2	.6
Total	2,420	19,979	31,401	12	100	157	.5	1.0

1/ Less than 0.05 percent.

Source: 1959 Census of Agriculture, Vol. 5, part 7 and Vol. II, Ch. 11, and 1964 Census of Agriculture, Vol. II, Ch. 6, table 16.

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Appendix table 7.--Farms by specified value of sales and average sales by type of farm, 1964

Type of farm	Farms with sales of $100,000 or more		Farms with sales of $1,000,000 or more	
	Total farms	Sales per farm	Total farms	Sales per farm
	Number	1,000 dollars	Number	1,000 dollars
Cash-grain	2,141	164	5	1,481
Tobacco	102	434	11	2,174
Cotton	3,465	220	36	3,089
Other field crops	2,237	283	68	3,059
Vegetable	1,590	361	94	2,079
Fruit and nut	2,511	300	93	2,316
Poultry	4,744	234	89	1,864
Dairy	2,576	206	19	1,975
Livestock (other than poultry and dairy farms and livestock ranches)	6,692	332	322	2,945
Livestock ranches	1,815	361	81	3,429
General	1,884	255	53	1,992
Miscellaneous	1,644	257	48	1,475
Total	31,401	272	919	2,576

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 8.--Regional distribution of number and sales of farms with sales of $100,000 or more, by specified size and by type of farm, 1964

Type of farm	Regional distribution of farms with sales of--											
	$1,000,000 or more			$500,000-$999,999			$200,000-$499,999			$100,000-$199,999		
	North	South	West	North	South	West	North	South	West	North	South	West
	Percent											
All farms	18	25	57	23	31	46	26	32	42	33	34	33
Cash-grain	---	---	100	3	35	62	10	46	44	21	52	27
Tobacco	100	---	---	86	14	---	52	48	---	16	84	---
Cotton	---	11	89	---	45	55	1	63	36	2	74	24
Other field crops	7	13	80	31	24	45	39	17	44	45	18	37
Vegetable	2	33	65	11	29	60	13	24	63	18	23	59
Fruit and nut	1	58	41	4	44	52	9	32	59	15	26	59
Poultry	21	43	36	27	44	29	31	47	22	34	47	19
Dairy	10	37	53	5	32	63	7	24	69	14	26	60
Livestock farms 1/	31	16	53	48	16	36	63	15	22	78	9	13
Livestock ranches	6	25	69	10	40	50	9	32	59	11	31	58
General	---	4	96	7	10	83	5	20	75	12	34	54
Miscellaneous	44	27	29	41	28	31	46	26	28	46	28	26
	Percentage distribution of sales											
	Percent											
All farms	15	23	62	23	31	46	26	32	42	33	34	33
Cash-grain	---	---	100	2/	2/	62	2/	2/	45	20	52	28
Tobacco	100	---	---	2/	2/	---	2/	2/	---	18	82	---
Cotton	---	4	96	---	43	57	1	62	37	2	74	24
Other field crops	4	15	81	31	23	46	39	17	44	45	17	38
Vegetable	2/	2/	64	2/	2/	60	12	24	64	18	23	59
Fruit and nut	2/	2/	34	2/	2/	51	9	33	58	15	26	59
Poultry	16	46	38	26	45	29	31	48	21	34	47	19
Dairy	2/	2/	2/	2/	2/	2/	7	24	69	13	26	61
Livestock farms 1/	27	14	59	48	16	36	63	15	22	77	9	14
Livestock ranches	3	18	79	10	39	51	9	32	59	12	30	58
General	---	2/	2/	6	2/	2/	5	19	76	11	33	56
Miscellaneous	44	24	32	41	29	30	45	26	29	45	28	27

1/ Livestock other than poultry and dairy farms and livestock ranches.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 9.--Number and sales of farms with sales of $100,000 or more by specified size and as a percentage of total for all commercial farms, by type of farm, North, 1964

Type of farm	Commercial farms, North		The largest farms as a percentage of all commercial farms in the North				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	1,137,087	100.0	0.9	1/	1/	0.2	0.7
Cash-grain	309,860	100.0	0.1	---	1/	1/	0.1
Tobacco	3,221	100.0	1.2	0.3	0.2	0.4	0.3
Cotton	3,484	100.0	1.3	---	---	0.2	1.1
Other field crops	7,996	100.0	11.8	0.1	0.3	2.8	8.6
Vegetable	9,005	100.0	2.6	1/	0.2	0.7	1.7
Fruit and nut	12,236	100.0	2.5	1/	0.1	0.5	1.9
Poultry	28,884	100.0	5.3	0.1	0.2	1.3	3.7
Dairy	286,765	100.0	0.1	1/	1/	1/	0.1
Livestock (other than poultry and dairy farms and livestock ranches)	342,499	100.0	1.4	1/	0.1	0.3	1.0
Livestock ranches	6,377	100.0	3.0	0.1	0.2	0.7	2.0
General	98,840	100.0	0.2	---	1/	1/	0.2
Miscellaneous	27,920	100.0	2.7	0.1	0.2	0.8	1.6
	Sales		Sales as a percentage of all commercial farms in the North				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	17,042	100.0	12.5	2.1	1.4	3.4	5.6
Cash-grain	3,882	100.0	1.4	---	2/	2/	1.2
Tobacco	48	100.0	71.0	49.7	2/	2/	2.9
Cotton	64	100.0	10.5	---	---	2.6	7.9
Other field crops	405	100.0	44.7	1.9	4.3	15.4	23.1
Vegetable	176	100.0	30.1	2/	2/	10.7	11.6
Fruit and nut	235	100.0	24.1	2/	2/	7.9	13.5
Poultry	906	100.0	35.5	3.0	4.3	12.0	16.2
Dairy	3,631	100.0	1.4	2/	2/	0.3	0.9
Livestock farms (other than poultry and dairy farms and livestock ranches)	6,034	100.0	18.3	4.2	2.0	4.3	7.8
Livestock ranches	134	100.0	35.6	6.1	6.1	10.0	13.4
General	1,065	100.0	2.7	---	0.4	0.6	1.7
Miscellaneous	462	100.0	40.4	6.8	7.1	13.9	12.6

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 10.--Number and sales of farms with sales of $100,000 or more, by specified size and as a percentage of total for all commercial farms, by type of farm, South, 1964

Type of farm	Commercial farms, South		The largest farms as a percentage of all commercial farms in the South				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	819,849	100.0	1.3	1/	0.1	0.3	0.9
Cash-grain	66,438	100.0	1.6	---	1/	0.2	1.4
Tobacco	168,163	100.0	1/	1/	1/	1/	1/
Cotton	154,336	100.0	1.6	1/	1/	0.4	1.2
Other field crops	18,184	100.0	2.2	0.1	0.1	0.5	1.5
Vegetable	9,137	100.0	4.3	0.3	0.5	1.4	2.1
Fruit and nut	12,595	100.0	6.0	0.4	0.6	1.8	3.2
Poultry	46,998	100.0	4.7	0.1	0.2	1.2	3.2
Dairy	57,982	100.0	1.2	1/	0.1	0.3	0.8
Livestock farms (other than poultry and dairy farms and livestock ranches)	133,445	100.0	0.5	1/	1/	0.2	0.3
Livestock ranches	34,573	100.0	1.7	0.1	0.1	0.5	1.0
General	78,779	100.0	0.7	1/	1/	0.1	0.6
Miscellaneous	39,219	100.0	1.1	1/	0.1	0.3	0.7
	Sales		Sales as a percentage of all commercial farms in the South				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	10,149	100.0	25.1	5.4	3.2	7.1	9.4
Cash-grain	1,007	100.0	16.9	---	2/	2/	11.8
Tobacco	1,071	100.0	0.9	---	2/	2/	0.5
Cotton	1,903	100.0	22.9	0.2	1.7	8.0	13.0
Other field crops	323	100.0	33.6	9.8	4.1	8.4	11.3
Vegetable	228	100.0	71.5	2/	2/	16.2	11.3
Fruit and nut	477	100.0	66.5	2/	2/	14.7	11.7
Poultry	1,596	100.0	32.6	4.8	4.3	10.6	12.9
Dairy	980	100.0	15.0	2/	2/	4.3	6.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	1,001	100.0	29.4	13.6	3.9	6.3	5.6
Livestock ranches	470	100.0	36.9	10.6	6.7	9.7	9.9
General	835	100.0	10.9	2/	2/	3.3	6.7
Miscellaneous	258	100.0	44.1	6.6	8.8	14.7	14.0

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 11.--Number and sales of farms with sales of $100,000 or more, by specified size and as a percentage of total for all commercial farms, by type of farm, West, 1964

Type of farm	Commercial farms, West		The largest farms as a percentage of all commercial farms in the West				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	208,776	100.0	5.5	0.3	0.3	1.6	3.3
Cash-grain	27,955	100.0	2.3	1/	0.1	0.5	1.7
Tobacco	---	---	---	---	---	---	---
Cotton	6,256	100.0	15.7	0.5	1.0	4.8	9.4
Other field crops	8,950	100.0	10.1	0.6	0.4	2.8	6.3
Vegetable	5,065	100.0	19.0	1.2	1.9	6.5	9.4
Fruit and nut	32,425	100.0	4.5	0.1	0.3	1.3	2.8
Poultry	6,238	100.0	15.6	0.5	1.1	4.2	9.8
Dairy	22,220	100.0	7.2	1/	0.3	1.9	5.0
Livestock farms (other than poultry and dairy farms and livestock ranches)	38,585	100.0	3.1	0.4	0.3	0.8	1.6
Livestock ranches	25,332	100.0	4.2	0.2	0.3	1.1	2.6
General	24,361	100.0	4.8	0.2	0.3	1.5	2.8
Miscellaneous	11,389	100.0	3.9	0.1	0.3	1.2	2.3
	Sales		Sales as a percentage of all commercial farms in the West				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	7,178	100.0	53.9	20.4	6.9	13.3	13.3
Cash-grain	617	100.0	20.3	1.2	1.9	7.0	10.2
Tobacco	---	---	---	---	---	---	---
Cotton	467	100.0	68.6	22.8	9.2	19.2	17.4
Other field crops	561	100.0	61.3	30.1	4.6	12.6	14.0
Vegetable	453	100.0	79.1	27.7	14.4	22.3	14.7
Fruit and nut	904	100.0	42.1	8.2	6.4	13.8	13.7
Poultry	417	100.0	64.2	15.1	10.7	18.2	20.2
Dairy	744	100.0	44.4	2/	2/	16.1	20.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	1,260	100.0	65.5	44.4	7.2	7.3	6.6
Livestock ranches	806	100.0	53.8	27.2	5.0	10.7	10.9
General	721	100.0	49.9	2/	2/	15.4	13.2
Miscellaneous	228	100.0	53.4	9.8	10.6	17.9	15.1

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 12.--Average sales of farms with sales of $100,000 or more, by type of farm and by geographic region, 1964

Type of farm	Average sales in North		Average sales in South		Average sales in West	
	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more
	1,000 dollars					
All farms	220	2,156	246	2,375	339	2,795
Cash-grain	137	---	157	---	194	1,481
Tobacco	853	2,174	163	---	---	---
Cotton	150	---	179	1,232	325	3,321
Other field crops	193	1,585	274	3,507	382	3,121
Vegetable	223	1/	418	1/	372	2,056
Fruit and nut	184	1/	421	1/	262	1,941
Poultry	208	1,422	233	2,003	275	1,960
Dairy	169	1/	219	1/	207	1/
Livestock ranches	247	1,627	304	2,498	413	3,922
Other livestock	233	2,523	398	2,677	683	3,271
General	169	---	170	1/	306	1/
Miscellaneous	251	1,497	252	1,304	272	1,600

1/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 13.--Sales or production of farms with sales of $100,000 or more, reporting specified products sold, as a percentage of total for all farms, 1959 and 1964

Specified product	Unit of production or sales	Production or sales as a percentage of total for all farms	
		1959	1964
		Percent	
Livestock and poultry sold alive, and their products sold:			
Cattle and calves	Dollar sales	22.7	32.8
Hogs and pigs	do.	1.9	4.7
Sheep and lambs	do.	15.7	29.5
Chickens including broilers	do.	14.8	23.3
Whole milk	do.	7.4	10.7
Eggs	do.	10.1	36.8
Specified crops:			
Corn for grain	Bushels harvested	1.8	3.8
Wheat	do.	NA	5.6
Oats	do.	NA	2.7
Barley	do.	NA	20.0
Sorghum for grain or seed	do.	NA	14.4
Rice	do.	NA	40.8
Soybeans	do.	NA	7.0
Potatoes	do.	25.5	53.0
Cotton	Bales harvested	NA	29.9
Tobacco	Pounds harvested	NA	2.0
Vegetables	Dollar sales	49.3	60.9
Fruits and nuts	do.	31.0	46.0

NA = Not available.

Source: 1959 Census of Agriculture, Vol. I, Ch. 11 and Vol. 5, part 7, and 1964 Census of Agriculture, Vol. II, Ch. 6.

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Appendix table 14.--Number and percentage distribution of farms with sales of $100,000 or more, by specified size in value of sales and by acreage, 1964

Size of farm in value of sales	Farms reporting acreage of—								
	Less than 10	10-69	70-139	140-259	260-499	500-999	1,000-1,999	2,000 or more	Total farms
	Number								
$1,000,000 or more	1	75	74	60	56	70	141	442	919
$500,000-$999,999	17	144	72	97	118	282	266	578	1,574
$200,000-$499,999	146	773	345	546	950	1,441	1,428	2,131	7,760
$100,000-$199,999	674	1,895	1,066	1,978	3,527	4,343	3,927	3,738	21,148
Total	838	2,887	1,557	2,681	4,651	6,136	5,762	6,889	31,401
	Percentage distribution								
	Percent								
$1,000,000 or more	0.1	8.2	8.1	6.5	6.1	7.6	15.3	48.1	100.0
$500,000-$999,999	1.1	9.1	4.6	6.2	7.5	17.9	16.9	36.7	100.0
$200,000-$499,999	1.9	10.0	4.4	7.0	12.2	18.6	18.4	27.5	100.0
$100,000-$199,999	3.2	9.0	5.0	9.3	16.7	20.5	18.6	17.7	100.0
Total	2.7	9.2	5.0	8.5	14.8	19.5	18.4	21.9	100.0

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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Appendix table 15.--Tenure under which farmland was operated, all farms, specified years, 1944-64

Year	Total farmland 1/	Percentage of farmland operated under--2/		
		Ownership	Rental	Paid management
	Million acres	Percent		
1944 3/	1,142	53	38	9
1949	1,161	56	35	9
1954 3/	1,160	56	35	9
1959	1,123	55	35	10
1964	1,110	54	4/ 36	10

1/ Except for 1944, totals for the 3 kinds of tenures were estimated by assuming that part owners(included in both ownership and rental) did not subrent their rented land.
2/ Computed before rounding numbers.
3/ Alaska and Hawaii not included.
4/ Estimated by subtracting acreages operated by owners and managers from total acreage.

Source: 1964 Census of Agriculture, Vol. II, Ch. 8, table 2, p. 754.

Appendix table 16.--Nonfarmwork of farm operators on farms with sales of $100,000 or more, by State, 1964

Region and State	Operators	Nonfarmwork of farm operator			
		Operators reporting 1/	Days worked on nonfarm jobs	Average days worked by--	
				Operators reporting 1/	All operators
	Number	Percent	Days	Days	Days
United States	31,401	16	720,135	142	23
New England:					
Maine	439	22	11,346	116	26
New Hampshire	42	14	880	147	21
Vermont	37	33	1,183	99	32
Massachusetts	156	12	3,106	163	20
Rhode Island	25	12	280	93	11
Connecticut	163	8	2,202	169	14
Middle Atlantic:					
New York	647	12	8,008	107	12
New Jersey	277	6	2,866	159	10
Pennsylvania	486	17	11,805	146	24
Delaware	162	19	5,640	188	35
Maryland	261	26	9,492	138	36
Lake States:					
Michigan	333	18	8,339	139	25
Wisconsin	358	16	9,854	167	28
Minnesota	537	21	15,714	137	29
Corn Belt:					
Ohio	475	15	11,263	154	24
Indiana	458	23	13,451	129	29
Illinois	1,053	17	14,895	81	14
Iowa	1,445	19	28,033	100	19
Missouri	482	23	17,054	156	35
Northern Plains:					
North Dakota	209	19	5,310	136	25
South Dakota	280	17	4,545	97	16
Nebraska	1,034	16	18,187	109	18
Kansas	748	16	15,436	128	21
Appalachian:					
Virginia	321	23	11,509	156	36
West Virginia	63	27	2,987	176	47
North Carolina	447	24	17,497	165	39
Kentucky	164	27	5,793	129	35
Tennessee	188	21	5,912	148	31
Southeast:					
South Carolina	338	20	9,420	143	28
Georgia	725	27	31,836	163	44
Florida	1,611	18	54,951	186	34
Alabama	412	26	19,342	179	47

See footnote at end of table.

Appendix table 16.--Nonfarmwork of farm operators on farms with sales of $100,000 or more, by State, 1964--Continued

Region and State	Operators	Nonfarmwork of farm operator			
		Operators reporting 1/	Days worked on nonfarm jobs	Average days worked by--	
				Operators reporting 1/	All operators
	Number	Percent	Days	Days	Days
Delta States:					
Mississippi	1,213	15	27,629	153	23
Arkansas	1,203	12	22,080	148	18
Louisiana	438	18	12,600	164	29
Southern Plains:					
Oklahoma	276	19	8,440	162	31
Texas	2,499	19	78,646	163	31
Mountain:					
Montana	251	16	6,340	163	25
Idaho	505	17	9,699	113	19
Wyoming	170	15	2,479	95	15
Colorado	675	17	12,386	111	18
New Mexico	318	15	6,314	134	20
Arizona	841	10	13,044	155	16
Utah	143	25	5,789	161	40
Nevada	89	11	1,530	153	17
Pacific:					
Washington	721	13	12,904	139	18
Oregon	512	12	7,761	127	15
California	7,043	11	110,562	141	16
Alaska	NA	NA	NA	NA	NA
Hawaii	127	14	3,766	209	30

1/ Includes some operators who worked on other farms. Less than 4 percent of the days worked off-farm was on other farms.
NA = Not applicable.

Source: 1964 Census of Agriculture, Vol. I, table 23.

Appendix table 17.--Average off-farmwork and off-farm income per farm, by operators and by other persons in operator households, by State, all farms, 1964

Region and State	Average days worked per farm at off-farm jobs by--1/		Average off-farm income per farm from all sources of--2/	
	Operators	Other members of operator households	Operators	Other members of operator households
	Days	Days	Dollars	Dollars
United States	79	46	2,360	824
New England:				
Maine	100	72	2,211	1,147
New Hampshire	112	73	2,864	1,216
Vermont	75	77	1,860	1,172
Massachusetts	84	67	2,684	1,396
Rhode Island	85	39	2,229	1,023
Connecticut	84	68	3,016	1,486
Middle Atlantic:				
New York	81	58	2,269	1,185
New Jersey	64	51	2,508	1,207
Pennsylvania	94	57	2,480	1,026
Delaware	78	46	2,211	835
Maryland	85	62	2,764	1,251
Lake States:				
Michigan	109	55	3,139	1,090
Wisconsin	69	51	1,832	886
Minnesota	48	37	1,680	649
Corn Belt:				
Ohio	100	48	2,870	973
Indiana	99	54	2,933	1,005
Illinois	60	39	2,147	808
Iowa	43	31	2,013	590
Missouri	80	40	2,270	699
Northern Plains:				
North Dakota	30	27	1,573	517
South Dakota	29	26	1,378	496
Nebraska	36	29	2,017	554
Kansas	65	38	2,392	704

See footnotes at end of table.

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other persons in operator households, by State, all farms, 1964--Continued

Region and State	Average days worked per farm at off-farm jobs by--1/		Average off-farm income per farm from all sources of--2/	
	Operators	Other members of operator households	Operators	Other members of operator households
	Days	Days	Dollars	Dollars
Appalachian:				
Virginia	85	58	2,183	988
West Virginia	109	38	2,679	691
North Carolina	69	61	1,678	855
Kentucky	71	39	1,812	660
Tennessee	85	54	2,030	820
Southeast:				
South Carolina	87	73	1,886	1,007
Georgia	91	64	2,233	972
Florida	105	49	3,239	925
Alabama	93	51	2,135	796
Delta States:				
Mississippi	81	50	1,759	698
Arkansas	86	44	1,832	606
Louisiana	95	35	2,575	669
Southern Plains:				
Oklahoma	102	41	2,827	697
Texas	93	42	3,052	800
Mountain:				
Montana	54	33	2,072	685
Idaho	83	48	2,294	814
Wyoming	58	37	2,203	798
Colorado	69	39	2,715	774
New Mexico	84	34	3,174	690
Arizona	92	41	3,976	909
Utah	118	56	3,392	977
Nevada	79	46	2,764	1,032
Pacific:				
Washington	107	48	3,450	960
Oregon	114	52	3,655	1,011
California	91	46	4,279	1,191
Alaska	107	34	5,319	979
Hawaii	129	97	3,309	1,735

1/ In the United States, nonfarm jobs accounted for 96 percent of all off-farmwork by operators and 92 percent of that done by other household members.

2/ Operators' off-farm income consisted of: 60 percent, wages and salaries; 21 percent, nonfarm businesses or professions and social security and other benefits; 19 percent, Government payments, rent, interest, dividends, and so forth.

Source: 1964 Census of Agriculture, Vol. II, Ch. 5, tables 22 and 23.

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Appendix table 18.--Off-farm income of all persons in farm operator households, by size of farm, all farms, 1964

Off-farm income	Size of farm 1/				
	Total 2/	Largest	Large	Medium	Small
	Dollars				
Wages and salaries	6,447,322,367	37,876,948	390,249,695	1,371,145,750	4,648,049,974
Nonfarm business or profession	1,154,776,676	19,373,461	132,838,482	284,366,754	718,197,979
Social security, pensions, veteran and welfare payments	841,370,922	3,553,721	39,125,993	147,293,553	651,397,655
Rent from farm and nonfarm property, interest, dividends, Government payments and so forth	1,604,223,997	85,228,547	424,091,365	590,115,999	504,788,086
Total	10,047,693,962	146,032,677	986,305,535	2,392,922,056	6,522,433,694
	Percentage distribution				
Wages and salaries	64.1	25.9	39.5	57.3	71.3
Nonfarm business or profession	11.5	13.3	13.5	11.9	11.0
Social security, pensions, veteran and welfare payments	8.4	2.4	4.0	6.1	10.0
Rent from farm and nonfarm property, interest, dividends, Government payments, and so forth	16.0	58.4	43.0	24.7	7.7
Total	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
2/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1964 Census of Agriculture, Vol. 2, Ch. 6, tables 15 and 16.

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Appendix table 19.--Off-farm income of all persons in farm operator households on farms with sales of $100,000 or more, by State, 1964

Region and State	Operator households	Off-farm income of operator households			
		Households reported	Total off-farm income	Average per household for--	
				Households reported	All households
	Number	Percent	1,000 dollars	Dollars	Dollars
United States	31,401	57	146,033	8,106	4,651
New England:					
Maine	439	56	787	3,201	1,794
New Hampshire	42	48	111	5,537	2,637
Vermont	37	70	240	9,210	6,472
Massachusetts	156	56	593	6,810	3,798
Rhode Island	25	64	55	3,464	2,217
Connecticut	163	58	477	5,077	2,928
Middle Atlantic:					
New York	647	56	1,549	4,254	2,393
New Jersey	277	53	841	5,758	3,035
Pennsylvania	486	54	1,485	5,626	3,056
Delaware	162	55	491	5,514	3,029
Maryland	261	58	813	5,351	3,116
Lake States:					
Michigan	333	59	1,117	5,726	3,353
Wisconsin	358	59	1,053	5,014	2,941
Minnesota	537	64	1,746	5,121	3,252
Corn Belt:					
Ohio	475	59	1,463	5,261	3,079
Indiana	458	63	1,730	6,028	3,778
Illinois	1,053	55	3,432	5,877	3,259
Iowa	1,445	65	5,425	5,734	3,754
Missouri	482	68	2,956	8,956	6,132
Northern Plains:					
North Dakota	209	74	1,106	7,132	5,289
South Dakota	280	68	1,202	6,360	4,293
Nebraska	1,034	69	5,230	7,335	5,058
Kansas	748	70	4,359	8,351	5,828
Appalachian:					
Virginia	321	64	1,475	7,126	4,595
West Virginia	63	67	203	4,829	3,219
North Carolina	447	68	1,961	6,410	4,388
Kentucky	164	68	1,037	9,256	6,321
Tennessee	188	66	1,066	8,597	5,670
Southeast:					
South Carolina	338	64	1,307	5,995	3,867
Georgia	725	65	2,879	6,138	3,971
Florida	1,611	50	6,941	8,612	4,309
Alabama	412	67	1,854	6,716	4,499
Delta States:					
Mississippi	1,213	58	5,176	7,405	4,267
Arkansas	1,203	47	4,099	7,230	3,408
Louisiana	438	54	2,843	12,044	6,490
Southern Plains:					
Oklahoma	276	70	4,572	23,813	16,566
Texas	2,499	61	21,340	13,930	8,540
Mountain:					
Montana	251	61	1,039	6,837	4,141
Idaho	505	57	1,892	6,569	3,746
Wyoming	170	59	828	8,276	4,868
Colorado	675	58	3,242	8,291	4,803
New Mexico	318	54	1,790	10,346	5,629
Arizona	841	45	4,099	10,788	4,874
Utah	143	62	679	7,630	4,749
Nevada	89	52	259	5,622	2,906
Pacific:					
Washington	721	58	3,289	7,926	4,562
Oregon	512	53	1,515	5,611	2,959
California	7,043	51	31,879	8,858	4,526
Alaska 1/	---	---	---	---	---
Hawaii	127	56	508	7,153	3,999

1/ Data for Alaska withheld to avoid disclosure.

Source: 1964 Census of Agriculture, Vol. I, table 23.

Appendix table 20.--Average age and years of schooling of commercial farm operators, by State, 1964

State	Average age of farm operator	Average years of schooling	State	Average age of farm operator	Average years of schooling
	Years	Years		Years	Years
Conterminous U.S.	49.4	9.5			
Alabama	50.3	8.2	Nebraska	47.9	10.2
Arizona	49.4	12.4	Nevada	48.9	11.0
Arkansas	49.7	8.8	New Hampshire	51.3	10.8
California	50.9	10.9	New Jersey	51.2	10.0
Colorado	48.7	10.4	New Mexico	49.8	10.1
Connecticut	51.3	10.4	New York	49.8	10.2
Delaware	50.0	9.4	North Carolina	48.5	7.9
Florida	52.0	10.2	North Dakota	47.4	9.3
Georgia	50.4	8.3	Ohio	49.4	10.4
Idaho	49.0	11.8	Oklahoma	50.7	9.9
Illinois	48.8	10.1	Oregon	50.9	10.8
Indiana	49.3	10.5	Pennsylvania	48.9	9.7
Iowa	47.5	10.2	Rhode Island	51.1	10.2
Kansas	49.7	10.5	South Carolina	49.6	8.0
Kentucky	49.3	8.3	South Dakota	47.5	9.7
Louisiana	49.8	7.9	Tennessee	50.5	8.2
Maine	50.5	10.6	Texas	51.2	9.7
Maryland	50.1	9.1	Utah	50.3	11.3
Massachusetts	51.8	10.9	Vermont	49.5	10.0
Michigan	49.4	9.9	Virginia	51.0	8.2
Minnesota	47.8	9.3	Washington	50.1	10.7
Mississippi	50.3	8.3	West Virginia	52.4	8.8
Missouri	50.5	9.6	Wisconsin	48.4	9.3
Montana	48.7	11.2	Wyoming	49.4	10.6

Source: Data derived from 1964 Census of Agriculture, Vol. I, State table 17.

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Appendix table 21.--Sales by family farms as a percentage of all farm sales, by States, 1964 1/

Region and State	Percent	Region and State	Percent
New England:		Southeast:	
Maine	47	South Carolina	47
New Hampshire	62	Georgia	57
Vermont	75	Florida	20
Massachusetts	44	Alabama	64
Rhode Island	50	Delta States:	
Connecticut	41	Mississippi	45
Middle Atlantic:		Arkansas	50
New York	63	Louisiana	52
New Jersey	43	Southern Plains:	
Pennsylvania	72	Oklahoma	79
Delaware	57	Texas	48
Maryland	65	Mountain:	
Lake States:		Montana	72
Michigan	79	Idaho	58
Wisconsin	87	Wyoming	57
Minnesota	89	Colorado	43
Corn Belt:		New Mexico	38
Ohio	81	Arizona	11
Indiana	85	Utah	63
Illinois	87	Nevada	29
Iowa	91	Pacific:	
Missouri	82	Washington	54
Northern Plains:		Oregon	54
North Dakota	87	California	21
South Dakota	88		
Nebraska	79		
Kansas	78	Total (48 States)	64
Appalachian:			
Virginia	62		
West Virginia	67		
North Carolina	72		
Kentucky	80		
Tennessee	75		

1/ Family farms are those with no hired management and with less than 1.5 man-years of hired labor.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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HEARINGS ON

THE ROLE OF GIANT CORPORATIONS IN THE AMERICAN AND WORLD ECONOMIES

PART 3. CORPORATE SECRECY: AGRIBUSINESS

Before the

SUBCOMMITTEE ON MONOPOLY OF THE SELECT COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE

Washington, D. C., March 1, 1972

OPENING STATEMENT BY SENATOR GAYLORD NELSON
Chairman, Subcommittee on Monopoly

Today and tomorrow the Subcommittee on Monopoly will continue part 3 of its hearings on the role of giant corporations in the American and world economies. Part 3 is concerned with the effects of corporate giantism and corporate secrecy in agriculture.

The three parts of that threefold topic are not only relevant but vitally important to small business, for several reasons.

Agriculture is important, first, because the family farm is itself a small business. In its highest form, when nature favors and society permits, it exemplifies the values the Senate Small Business Committee exists to serve and perpetuate. Beyond that, agriculture is important because the condition and survival of many other types of small businesses, and of small towns, hang upon the condition and survival of family farming concerns. On this point, our first witness today is a pioneering expert, and all our witnesses have highest credentials.

Corporate giantism is important, because large corporations are moving into agriculture and affecting the survival prospects of family farms and of the small businesses that serve and are served by the farms.

Corporate secrecy is important, because its practice prevents farmers and the public from knowing all they need to know in order to understand, evaluate and make policy decisions on important cultural, political and economic matters which affect the welfare and future of the country.

The extent to which farmers' lives are being changed is reflected nowhere more vividly than in the agricultural census data. The slightly over 2.9 million farms in this country today are just half the number that existed 25 years ago, when Professor Goldschmidt, our first witness, made his study of Arvin and Dinuba, California.

This morning, Dr. Goldschmidt is going to take us on a guided tour of the making of that famous study--and of a part that wasn't made--and then he and his colleagues will discuss later work in the same field. Even more important, they will discuss the urgent work that is still waiting to be done.

The Subcommittee welcomes as its witnesses today Professor Walter Goldschmidt of the Department of Anthropology, University of California at Los Angeles; Professor Philip M. Raup of the Department

of Agricultural and Applied Economics, University of Minnesota; Professor Eugene A. Wilkening of the Department of Rural Sociology, University of Wisconsin; and Professor Richard D. Rodefeld of the Department of Sociology, Michigan State University.

We shall hear them in that order.

For Release Upon Delivery
March 1, 1972

Statement of

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Prepared for

Hearings on

THE ROLE OF GIANT CORPORATIONS IN THE AMERICAN AND WORLD ECONOMIES

PART 3. CORPORATE SECRECY: AGRIBUSINESS

Before the

SUBCOMMITTEE ON MONOPOLY of the SELECT COMMITTEE ON SMALL BUSINESS

UNITED STATES SENATE

Room 318, Old Senate Office Building

Washington, D. C.

THE CURRENT STATUS OF U.S. "CORPORATE" FARM RESEARCH

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THE CURRENT STATUS OF U. S. "CORPORATE" FARM RESEARCH

I. Introduction

In the last four to five years, a great deal of concern has been expressed by many rural people, farm and nonfarm, about a phenonmenon commonly referred to as "corporate" or "corporation" farming. The fact this hearing is being held today is in itself strong evidence of this concern. Claims have been made that for various reasons the number and importance of such farms have been increasing in recent years. It has been argued a continuation of this trend would have more negative or undesireable effects associated with it than positive effects. This has provided the major justification for attempts to exert control over or influence the trend toward "corporate" farms.

My major objective in this presentation will be to address various issues stemming from and suggested by this situation. Specifically, I would like to review: what some of the major questions in this area are and the types of information needed; the findings and adequacy of a few major research efforts in the area of "corporate" farming; and a proposal for research which would seek to determine what community effects would be associated with a change from "family" to "corporate" farms.

II. Major Questions About "Corporate" Farms

From a research and policy perspective, research should be carried out and answers provided to at least six major questions about "corporate" or "corporation" farms. These questions are:

1. What are they?
2. What are their characteristics?
3. How do they differ from "family" farms?

4. What is their trend in numbers and characteristics?

5. What is causing the trend toward them?

6. What effects will accompany a trend toward them?

A. What is a "corporate" or "corporation" farm?

The first question which must be answered is "what is a 'corporate' or 'corporation' farm"? The centrality and importance of this question is derived, from the fact that the answer provided to it will influence the answers provided for all additional questions asked about "corporate" farms. The answers to the other questions, of course, will determine the extent to which "corporate" farms are viewed as a societal problem, the urgency with which attempts will be made to solve the problem, and the ways in which the problem might be solved. Discussions of "corporate" farms and the provision of answers to questions about "corporate" farms have been hindered considerably and often worked at "cross-purposes" because of differences in how "corporate" farm have been defined.

For instance, some have defined "corporate" farms, generally, as legally incorporated businesses with agricultural production. When this approach is taken, an attempt is usually made to distinguish between incorporated "family" (closely held) and "nonfamily" (nonclosely held) farms. Incorporated "nonfamily" farms most likely would be those thought of by most as "corporate" farms. "Corporate" farms have also been defined, primarily through examples in the mass media as farms owned by nonfarm corporations such as Tenneco, Stokely Van Camp, Purex, Boeing, Ralston Purina, Gates Rubber, etc. Another definition of "corporate" farms is large, absentee owned farms with hired managers and hired workers. This definition is derived from the testimonies of rural farm and nonfarm people before this Subcommittee in Omaha and Eau

Claire in 1968.[1] "Corporate" farms could also be defined as all "nonfamily" farms. Here, of course, a definition of what a "family" farm is becomes necessary. Such a definition will, of course, be necessary if "corporate" and "family" farms are to be compared.

In the past, two types of farms have been equated with "family" farms: those owner-operated and those using less hired labor than that provided by the individual operator and his family. "Nonfamily" farms have been equated with nonowner-operated farms (tenant and hired manager), and those using more hired labor than that provided by the individual operator and his family.[2]

While all of the definitions of "corporate" farms sound similar, and to many perhaps appear the same, they are in fact all different. Thus, while all nonfarm corporations are legally incorporated, not all legally incorporated farms are nonfarm corporations. Similarly not all large farms with absentee owners, hired managers and hired workers, or all "nonfamily" farms are legally incorporated. While all nonfarm corporation farms are "nonfamily", not all "nonfamily" farms are owned by nonfarm corporations. Not all large farms with absentee owners, hired managers and hired workers are owned by nonfarm corporations. These may also be owned by an individual, family or small group of unrelated individuals. With the variety of "corporate" farm definitions which have been used, it is not surprising disagreements have occurred over the number, characteristics, trends and significance of "corporate" farms.

---

[1] Corporation Farming, Hearings before the Subcommittee on monopoly of the Select committees of Small Business, United States Senate, ninetieth Congress, Second Session on the Effects of Corporation Farming on Small Business, Great Plains and Upper Midwest, U.S. Government Printing Office, Washington, 1968.

[2] Discussions of these farm types and their definitions can be found in: Nikolitch, Radoje, Our 31,000 Largest Farms, USDA ERS, Agr. Econ. Rep. No. 175, March 1970 and Moyer, David O., Marshall Harris and Marie B. Harmon, Land Tenure in the United States: Development and Status, USDA ERS Agr. Inf. Bul. No. 338, June, 1969.

1. Farm Types Defined

Clearly, a classification system of farms is needed which will elicit a high level of unanimity, will be comparable to classifications used in the past and be flexible enough to overcome major differences of opinion as to what constitutes a "family", "nonfamily" or "corporate" farm. I have developed one such scheme which I think satisfies these criteria. Four ideal types of farms are identified. These types are: family (FF), tenant (TF), larger than family (LTFF) and large scale industrial (LSIF). To establish these farm types, all farms are first divided into two groups: those owner-opeated and those nonowner-opeated. Essentially, this is a distinction between absentee and nonabsentee owned farms. Owner-operated farms are then divided into those which have less than half their total work provided by hired workers (FF), and those which have more than half their work provided by hired workers (LTFF). The same distinction is made for non-owner-operated (absentee owned) farms. Those with less than half their total work provided by hired workers are classified as TF's, those with more than half as LSIF's.

2. "Corporate" Farm Defined

Taking this approach, what then is a "corporate" farm? and a "family" farm? Clearly, the LSIF is most directly analogous to what has been referred to as a "corporate" farm by rural people and farm organization leaders. Gilbert Rhode, the President of the Wisconsin Farmers Union who testified before this Subcommittee on December 1, 1971, as a spokesman for the National Farmers Union, has stated that his organization is most concerned with those farms identified by this speaker as being of the large scale industrial type (LSIF)[3].

---

[1]Wisconsin Farmers Union News, Vol. 30, No. 7, April 12, 1971, p. 4.

Since these farms have hired managers and workers, they also would be expected to be larger than the average farm.

In adopting this definition, it will probably be useful to distinguish between two major types of LSIF's: those owned by nonfarm corporations and those owned by an individual, family or small group of unrelated individuals. As was pointed out earlier, most of the publicity to date has centered around LSIF's owned by nonfarm corporations.

One unfortunate function of the exclusive publicity given to LSIF's owned by nonfarm corporations has been the resultant impression created that this is all that has been meant by "corporate" farms. This most assuredly is not the case, however. At the local community level, rural people are probably most concerned with LSIF's owned by an individual, family or small group of unrelated individuals, if for no other reason than most LSIF's are of this type. Our research in Wisconsin, for instance, found 76% of all incorporated LSIF's were of this type.[4] Furthermore, when the possible effects of "corporate" farms on local communities have been discussed, distinctions have not been made between the two types of LSIF's. Numerous examples were presented in this Subcommittee's 1968 hearings of specific "corporate" farms which were actually owned by an absentee individual, family or small group of unrelated individuals, not a nonfarm corporation.

It should also be kept in mind that if it is agreed all LSIF's are "corporate" farms, then when "corporate" farms are enumerated for study, all LSIF's should be included in that enumeration. Enumerations of legally incorporated farms will not include all LSIF's. If the research is accurate, all or most nonfarm corporations with farm operations will be included, but not all LSIF's

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[4] Rodefeld, Richard D., Wisconsin Incorporated Farms I: Types, Characteristics and Trends, Center for Applied Sociology (MI), Department of Rural Sociology, University of Wisconsin, Madison, December, 1971, p. 12.

owned by an individual, family or small group of unrelated individuals since this type of LSIF need not be legally incorporated.

3. "Family" Farm Defined

I think the family type farm (FF) as defined here most closely approximates the historical meaning of "family" farm and the meaning still attached to this term by most Midwestern farmers, i.e. a farm owned and managed by an individual or a family, who also do all or the majority of the work on the farm. Undoubtedly, everyone would agree that family type farms (FF) are "family" farms even though disagreeing, perhaps, on whether TF's and LTFF's are most appropriately viewed as "family" or "nonfamily" farms. This suggests the desireability of classifying these farm types separately and distinguishing them from either FF's or LSIF's. If farms are classified and described in terms of these four farm types, then regardless of how individual viewers choose to define "family" or "nonfamily" farms, they will be able to aggregate the data in a way consistent with their views. An example of what is meant here will also illustrate this classification procedure is consistent with two other major farm classification systems. You will recall one major classification was based on who operated the farm on a daily basis: the owner (part or full), a hired manager or a tenant. The tendency has been to view owner-opeated farms (FF's and LTFF's) as "family" and nonowner-operated farms (TF's and LSIF's) as "nonfamily". The second major type of classification was based on the amount of hired labor. Farms employing less than 1.5 man years of hired labor per year (TF's and FF's) have been viewed as "family", while those employing more than 1.5 man years (LTFF and LSIF) have been viewed as "nonfamily". Thus, if farms are classified initially as to the four suggested types, they can be combined in various ways to approximate "family" and "nonfamily" farms as specified in previous classifications. This flexibility was

not present in either of the previous classifications.

B. How Many "Corporate" (or LSIF) Farms are There and What Are Their Their Characteristics?

Information should be obtained on the number and basic descriptive characteristics of "corporate" (LSIF) farms for the nation as a whole and for individual states. At a minimum, the following types of information should be obtained: acreage characteristics (owned, rented to and from, crop acres and total acres operated), production characteristics (types, quantity, value), numbers and types of managers and hired workers, number and types of owners, nonagricultural business interests of the owners, the value of the farm, and year established. With this and perhaps other information, the present absolute status of LSIF's or "corporate" farms can be assessed for the nation and individual states.

This information will play an important role in determining the extent to which LSIF's or "corporate" farms are viewed as a problem at the present time and might influence the urgency associated with attempts to solve the problem. For instance, if a small number of such farms are found nationally, equally distributed across states and enterprise areas and do not account for high percentages of total farm sales or sales within specific product areas, not much of a problem would seem to exist and concern with these farms on this basis would be low. If on the other hand, these farms are found to be presently playing a significant role either in all states or a large number of states and/or in all or a number of specific product areas, it is much more likely they will be viewed as a problem presently worthy of research and legislative activity. Three research efforts which have sought to provide this type of information will be discussed in this presentation. They are: the 1968 USDA ERS national survey of legally incorporated farms; the 1969 Census of Agriculture and Wisconsin research on legally incorporated farms.

C. How Do "Corporate" (LSIF) Farms Differ From "Family" Farms"

The information sought here is what the magnitude of difference is between "corporate" (LSIF) farms and "family" farms for various farm characteristics. The same information necessary or desireable to describe "corporate" (LSIF) farms can also serve as the basis for comparisons between such farms and "family" farms. Thus, average acreages for the nation and individual states could be compared as could average: income, number of hired workers and production characteristics (number of beef cattle, milk cows, acres of vegetables, etc.). Comparisons should also be made in terms of the national and state totals of various farm characteristics (acreage, production, sales, etc.) accounted for by each type of farm.

These relative types of information will or could have the same effects suggested for the absolute "corporate" (LSIF) farm characteristics. Thus, if the magnitude of difference between "corporate" (LSIF) and "family" farm averages for various farm characteristics is small, and "corporate" (LSIF) farms account for low percentages of all types of agricultural production and sales for the nation and individual states, no problem will be perceived as presently existing with "corporate" (LSIF) farms. If the differences in average characteristics are large and/or "corporate" (LSIF) farms account for high percentages of sales in all or some production areas, the probability is higher these farms will be viewed as a present problem and a threat to "family" farms. One reason for devoting attention to the ways in which "corporate" and "family" farms are defined is that this alone can influence the magnitude of differences observed, just as it will influence the number and absolute characteristics of "corporate" farms.

The USDA, Census for Agriculture and Wisconsin research report information related to this question.

D. What is the Trend in the Number of "Corporate" (LSIF) Farms and Their Characteristics?

This information is important since it will suggest at what point in the future "corporate" (LSIF) farms might comprise a problem even though no problem presently exists. The major concern here would be with the rate at which new "corporate" (LSIF) farms are being established and what the growth rates in terms of acreage, income, production, etc. are for this type of farm. If it is decided no problem presently exists with "corporate" (LSIF) farms and these growth rates are found to be low, then the sense of urgency in solving any problems associated with such farms will be lessened. High or rapid growth rates should or could have the opposite result, especially if found in conjunction with present high absolute numbers and large relative differences when compared to "family" farms. The USDA, Census of Agriculture and Wisconsin research have information relevant to this question.

E. What is Causing The Trend Toward "Corporate" (LSIF) Farms?

Related to the trend information and its assessment is information which would provide an understanding of the forces which might be causing a change from "family" to "corporate" (LSIF) farms. A knowledge of these forces is necessary not only to understand the present status of "corporate" (LSIF) farms, but also for an accurate assessment of what the future trend might be. The present absolute and relative status of such farms might be a short range abberation. On the other hand, the forces which have brought about the present level of "corporate" (LSIF) farms might continue indefinitely into the future, and perhaps be strengthened with a resultant increase in the level of such farms over time. A second reason for the importance of this information is, if it is decided to be in society's best interest to control, regulate or restrict "corporate" (LSIF) farms, such a goal might be achieved by removing those

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forces responsible for the increased number and/or status of such farms.

The general question which might be asked here is "What conditions, factors and forces are allowing for and causing 'family' farms to be replaced by 'corporate' (LSIF) farms?" Implicit in this question are two more specific questions. These are:

a) What conditions, factors and forces are causing "family" farms to cease operation? and,

b) What conditions, factors and forces are causing "corporate" (LSIF) farms to be established?

Certainly these two phenomena are interrelated. Thus, one of the major explanations for a decrease in "family" farms might be an increase in "corporate" (LSIF) farms, and conversely, "corporate" (LSIF) farms might be increasing because of land made available through the discontinuation of "family" farms. Relatively different causal processes might be involved beyond this basic interrelationship, however.

1. Possible Causes of a Decline in "Family" Farms

"Family" farms could be ceasing operations for a variety of reasons quite independent of the status of "corporate" (LSIF) farms. One of these factors or conditions might be: the inability of the operator to secure an adequate income, which in turn might be explained by a variety of factors, such as the inability of farmers to organize and bargain collectively with processors for the price of their products, the inability to secure capital for farm expansion and technological improvements, high property taxes, inefficient management, or the inability to obtain land for expansion.

With the retirement or death of the farm operator, there may be no other family members available , willing or able to take the operation over. Even if there was a son willing to take over the operation, a number of factors either singly or in various combinations might result in the farm's sale to

nonrelatives. Some of these factors are: a large number of brothers and sisters, inheritance laws, a high farm value, anticipated low future earnings and low accessibility to large amounts of capital. The farm operator may have had off-spring who no longer were available to assume the operation of the farm since they had acquired nonfarm occupations. If this was the case, then the question might be raised as to why they left the farm and farming in the first place. This would be especially true if an opportunity had existed for them at the completion of their schooling to assume the operation of the family farm. Certainly factors like low anticipated future earnings and the low prestige which society has accorded to its farmers might be relevant here.

2. Possible Causes of an Increase in "Corporate" (LSIF) Farms

On the other hand, the major conditions, factors and forces leading to or causing "corporate" (LSIF) farms to be established might be quite different from those affecting the continuance or discontinuance of "family" farms. Furthermore, these causes might be found in a number of institutional areas. For instance numerous economic factors might be influencing such a trend or change, such as: speculation in land and anticipated future demands for food; the low wages paid to hired labor made possible in part by the legal difficulties encountered by hired workers in unionizing; the availability of relatively large sums of nonfarm capital for investment; and high, assumed or real profits as a function of differential productivity and efficiency, economies of scale and vertical integration. Characteristics of the legal structure such as differential advantages gained from various income tax procedures, such as those relating to the "writing-off" of farm losses and capital gains, would be relevant here. Governmental programs, for instance, subsidy programs and those relating to import quotas might serve as inducements for the establishment and

expansion of "corporate" (LSIF) farms. Certain societal values might also be relevant here, especially to the extent they are supportive of or detrimental to restrictions which might be placed on "corporate" (LSIF) farms. Three such values might be: those concerned with the universal freedom of property ownership expressed perhaps in an unwillingness to place any restrictions on the ownership of private property including farms; the assumed links between bigness, corporations and progress and the assumed inevitability and desireability of functional differentiation and division of labor in the economic sphere, including farms.

LSIF's might also be evolving from former FF's and LTFF's. If with the retirement or death of the owner-operator, a desire still exists to keep the farm in the family, though not operated by the family, the retired owner-operator or heirs might hire a manager (former LTFF) or manager and workers (former FF) to operate the farm. In either case, a LSIF would be established.

Four additional distinctions might be useful in attempting to specify the causal processes leading to "corporate" (LSIF) farms. An attempt might be made, for instance, to specify what factors cause or lead to: the absentee ownership of land; the absentee ownership of large tracts of land with hired managers and hired workers; the establishment of "corporate" (LSIF) farms by nonfarm corporations; and their establishment by an individual, family or small group of unrelated individuals. Nonfarm corporations may be establishing "corporate" (LSIF) farms for major reasons quite different from those of individuals or families.

While numerous suggestions have been made by various authors as to the conditions, factors and forces affecting the trend from "family" to "corporate" (LSIF) farms, little or no research has been carried out on what these conditions, etc. might be, and what kind of relative weights the various factors might have.

This should definitely be an area of high research priority.

F. What Effects Will Accompany A Trend Toward "Corporate" (LSIF) Farms?

Perhaps the most important empirical information needed is what effects will accompany a change from "family" to "corporate" (LSIF) farms. As Professor Wilkening has pointed out, ideally the effects of such a change should be determined for all levels of society: national, regional, state, community, farm, family and individual.

Regardless of the present or future status of "corporate" farms in the U.S., a comparison of the social and economic costs and benefits associated with a change from "family" to "corporate" farms should determine what the society's policy toward "corporate" farms will be. If the social and economic costs to society exceed the benefits of such a change, then any additional changes in this direction should be prevented. The reaching of such a conclusion might also suggest such farms presently existing should be discontinued. In other words, major land reforms might be suggested. The reverse situation should also hold. If the social and economic benefits to society of "corporate" farms exceed their costs, then they not only should be allowed to exist, but they should be encouraged with just and humanitarian programs developed for those farmers displaced by this change.

For this question to be adequately addressed, research wise, a variety of methodological approaches will be necessary not only between levels, but also within specific levels. An example of different methods used at the same level is Professor Goldschmidt's intensive, comparative community study of Arvin and Dinuba where information was obtained from a variety of sources and the Wisconsin research commented on earlier by Professor Wilkening, which obtained information on the community role characteristics of incorporated farm resident owners, hired managers and hired workers. Findings from this research will be

reviewed later.

1. The Status of Research on the Effects of a Change from "Family" to "Corporate" Farms

Given the great importance of information about what effects would accompany a change from "family" to "corporate" (LSIF) farms at the various levels of society, precious little research has been carried out addressed specifically to this question. At the national, regional and state levels, there are theories as to what the effects of such a change would be, and some information exists which has implications for these levels. For instance, questions have been raised about a continued trend toward this type of farm in terms of the implications and possible effects on central markets, food prices, amount of vertical integration, concentration of production, political democracy and preservation of natural resources among others. There are no studies I know of which have actually been carried out at these levels addressed to such questions, however.

At the community level, Professor Goldschmidt's study is still the only study which has been addressed to this change which has used the community as the unit of analysis. Other research such as that carried out at Wisconsin, has addressed the question of effects at this level, but the unit of analysis has bee the individual not the community.

Some research, but not a great deal, has been carried out at the level of the farm or firm. Research dealing with the questions of changes in productivity and efficiency are examples of such research.

As pointed out earlier by Professor Wilkening, the Wisconsin research tried to obtain some information on the effects of farm change at the levels of the family and individual. Little other research has been carried ~~on,~~ out however, addressed to the question of effects at these levels.

Generally, it might be said very little research has been conducted at any level of society on what the effects of a change from "family" to "corporate" (LSIF) farms would be. This should not be taken to imply there are no ideas or suspicions as to what effects might accompany such a change. It states, rather, that these ideas and suspicions have not yet been proven or demonstrated in a rigorous and scientific way. ~~The~~ One reason such demonstrations have not been made is simply because so little scientifically rigorous research has attempted to test out their validity.

2. Farm Changes With Possible Community Effects

While the effects associated with a change from "family" to "corporate" (LSIF) farms at the community level should be determined, in an ideal sense, it would also be desireable to determine what the specific causes of those effects were. In other words, if certain effects are brought about by a change to "corporate" (LSIF) farms, what is it specifically about such farms that caused the effects? The definitions of FF's and LSIF's are suggestive of two possible sources of these effects. First, LSIF's are absentee owned, while FF's are not. A change from nonabsentee to absentee farm ownership might in itself have independent community effects. For instance, profits earned from the farm operation which formerly remained in the community will leave the community with absentee ownership.

Second, a change from FF's to LSIF's will involve a major change in the composition of the rural farm work-force. Namely, a change from resident farm owners and their families to nonowning hired managers, workers and their families. Relatively independent community effects might be associated with such a change, if those comprising the two different work forces are found to differ in their relationships to community institutions and in the nature of their community roles. A third possibility not suggested directly by the definitions of FF's and LSIF's

is that a change from FF's to LSIF's might result in a reduced man:land ratio of community hinterlands. If this decrease is not off-set by other forces, depopulation will occur. This depopulation could also have independent effects on the community.

3. Other Research Relevant to the Effects of a Change From "Family" to "Corporate" (LSIF) Farms

As pointed out previously, while only a few research studies have been carried out specifically on the question of what effects would be associated with a change from "family" to "nonfamily" or "corporate" (LSIF) farms, some research has been carried out relevant to this question. For instance, a large number of studies were carried out in the 1930's and 1940's on the effects of tenancy. One of the major characteristics of tenant farms is that they are absentee owned. The effects which were found to be related specifically to absentee ownership might also be relevant to the effects of LSIF's which also are absentee owned. Second, some research has been carried out on the effects of absentee owned corporations on communities. One such study was that carried out by Mills and Ulmer for this Subcommittee. The effects of absentee owned corporations located in the population centers of communities may be similar to or be relevant to the effects of their location in the community's hinterland. Some research has also been carried out on the effects of large corporations at the national level, especially in terms of market effects, which might be suggestive of the effects in this area and at this level for "corporate" (LSIF) farms. A good deal of research has also been carried out on the effects of rural depopulation. If depopulation is found to be one major outcome of a change from "family" to "corporate" (LSIF) farms, then this research will be useful in specifying what the effects of such a change will be.

III. A Review of Four Major Studies on "Corporate" (LSIF) Farms

I would now like to review the findings and adequacy of four major research efforts which have sought to provide answers to some of the previous six questions. This research is: the 1968 USDA ERS national survey of legally incorporated farms; the 1969 Census of Agriculture; 1969-1970 Wisconsin research and Professor Walter Goldschmidt's studies of Arvin and Dinuba. The first two research efforts and parts of the Wisconsin research are most relevant to questions about the absolute characteristics of "corporate" (LSIF) farms, their characteristics relative to "family" farms, and trends in their number and characteristics ~~of "corporate" (LSIF) farms~~. The Wisconsin interview survey and Professor Goldschmidt's research are most relevant to the question of community effects associated with a change from "family" to "corporate" (LSIF) farms. Comments will also be made on certain aspects of corporate secrecy hindering effective research.

A. The 1968 USDA ERS Survey of Incorporated Farms

In 1968, the Economic Research Service division of the USDA conducted a nation-wide enumeration of all incorporated businesses directly engaged in agricultural production.[5] This research was initiated by Secretary of Agriculture Freeman due to concern expressed over an apparent increase in nonfarm corporations entering farming and a lack of empirical data on what the magnitude of this trend was. The major objectives of the research were to determine the number, kinds and general characteristics of corporations involved in the production of farm products. Specific information obtained was: year of incorpor-

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[5]The results of this research have been reported in USDA ERS Agr. Econ. Rep. Nos. 209, 156 and 142.

ation, type of owner (Individual, family, other), types of business interests, number and types of managers and workers, acreage and production characteristics and value of agricultural production.

1. The Importance of the USDA ERS Survey and Its Findings

This research and its findings is of great importance for a number of reasons. First, similar data exist for only a few states and no comparable data exists for the nation as a whole at this time (the 1969 Census of Agriculture will have similar data when published). As a result, this particular research and its findings has acquired an extremely high level of importance and usage. Its importance is also heightened by the fact it has the legitimacy and prestige of the federal government behind it. Up to this point in time, this research has been the primary, if not exclusive source of descriptive information available to state and national policy makers, policy influencers and parties generall interested in the subject of "corporate" farming.

Given the importance of this research and its findings, I think it is importa to recognize what some of ~~the~~ the limitations ~~of this research and its findings~~ are. The following comments are summarized from a paper which has recently been completed, based in part on a replication of the USDA research in Wisconsin.[6]

2. The Proper Universe of "Corporate" Farms May Not Have Been Studied

The universe of "corporate" farms studied by the USDA were all legally incorporated farm businesses involved in agricultural production. As pointed out previously, this type of enumeration also includes incorporated FF's, TF's and LTFF's which to date little concern has been expressed about. This is not

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[6]Rodefeld, Richard D., "The 1968 USDA ERS Survey of U.S. Incorporated Farm Operations: A Critique of Its Accuracy, Conceptualization and Procedures," submitted for publication to the American Journal of Agricultural Economics, January, 1972.

necessarily a problem, however, as long as these farms are kept separate from "corporate" or LSIF's. More importantly, in terms of the universe studied, large absentee owned farms with hired managers and hired workers (LSIF's) which were not incorporated were not included. Because of this, there is no way of knowing from this research what the total number of LSIF's is or what their charactertics as a group are.

An estimate of what the upper limits for LSIF's were in 1964 can be obtained from the characteristics of those farms operated by a hired manager. Although the exact percentage is not known, most of these farms undoubtedly had absentee owners. Approximately 70 per cent of these farms reported hired workers in 1964, suggesting 30 per cent were either tenant or owner operated.[7] In 1964, there were 15,088 commercial farms operated by hired managers. These managers operated 62.5 million acres of land, averaging 4,146 acres per farm and had an average value of land and buildings of $564,998 and an average value of products sold of $163,117.[8] This author has estimated that approximately 10,300 of these farms were LSIF's in 1964, averaging $233,859 sales per farm and accounting for 7.0 per cent of all commercial farm sales.[9] It is not known, of course, how many or which of these farms were incorporated and enumerated by the USDA or were unincorporated and left out. Furthermore, the characteristics of those LSIF's left out are not known. Assuredly, if all the LSIF's had been enumerated, their number would have been greater than those enumerated by the USDA.

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[7] Land Tenure In the United States, ---, op. cit., p. 19.

[8] Ibid, p. 15.

[9] Rodefeld, Richard D., "American Agriculture: Farm Types of the Future: Processes Affecting and Differential Effects",an unpublished (MI) paper, p. 7.

3. The Accuracy with Which Legally Incorporated Farms Were Enumerated Appears Quite Low

In Wisconsin, it was found 37 per cent (N=195) of the corporations enumerated by the USDA (N=532) were not qualified for inclusion. A large number of these farms were not incorporated (N=99), had no agricultural production or business (N=40), were inactive or dissolved, tree farms, forestry operations, hunting and fishing clubs, recreational farms or were excess multi-county units (N=35). Furthermore, 43 per cent (N=252) of all the farm corporations actually found in Wisconsin (N=589) were not enumerated by the USDA. These determinations were based on a comparison of the actual corporations enumerated by the USDA and by Wisconsin researchers. The latter research would appear to be most accurate, since it was based on an initial enumeration derived from a review of all Wisconsin corporate tax returns for 1966-67 followed up by questionnaires sent to each corporation with agricultural production and/or income. The USDA enumeration, on the other hand, was provided by county ASCS managers on the basis of office records, and personal knowledge and other information. Since exactly the same enumeration procedures were followed in 46 other states, similar levels of accuracy or inaccuracy might be expected for these other states.

4. The Accuracy of the Information Collected for Each Farm Corporation Appears Quite Low

Most of the specific information obtained by the USDA for each Wisconsin farm corporation was also replicated in the Wisconsin research. It was possible to assess the accuracy of the USDA information by comparing the characteristics of those farm corporations enumerated in both surveys. There were 337 such corporations. Comparing the totals of various characteristics in the two samples, it was found the USDA underestimated the total number of acres actually owned by 37%, acres rented by 269%, number of cattle fed by 80%, number of milk

cows by 54%, number of sows by 216% and acres of vegetables by 37%. Smaller differences were found for seven other characteristics. Other statistical procedures also showed the accuracy of information obtained for the same farm corporation in the two studies to be quite low. Since the USDA obtained its information about farm corporations from ASCS offices, while the Wisconsin research obtained its information from persons directly connected with the corporation, it does not seem unreasonable to assume the Wisconsin information was more accurate than the USDA's. Again, since the USDA used exactly the same procedures in 46 other states, similar levels of accuracy would be expected for these other states.

5. The Accuracy of Specifying Average Incorporated Farm Characteristics and Their State Totals Appear Quite Low

The USDA found 532 incorporated farms in Wisconsin while the Wisconsin research found 589, a 10% difference. A large amount of difference was observed between the averages for various farm characteristics and state totals. Thus the average number of acres operated found by the USDA was 222 acres less than that found by Wisconsin, acres rented was 245 acres less, number of cattle fed 94 less, milk cows 35 less, acres of potatoes 82 more and acres of vegetables 186 less. The USDA underestimated total acres operated by 46% (169,781), acres rented by 298% (149,906), number of cattle fed 46% (9,464), number of milk cows 35% (3,269), number of sows 86% (826) and acres of vegetables 65% (35,595). It would thus appear the USDA incorporated farm averages and totals for Wisconsin vary a good deal from those found in the Wisconsin research. Since the same proceudres were followed in 46 other states, similar differences might be expected in these states. Two major explanations are apparent for these differences. First, undoubtedly the information provided by ASCS offices was innacurate in many instances. Second, it was found those farms incorrectly included (not qualified) by the USDA were generally smaller than those incorrectly excluded.

6. It is Not Possible to Distinguish Between "Family" Farms Which Have Incorporated and Incorporated "NonFamily" or "Corporate" (LSIF) Farms

As pointed out earlier, little or no concern exists with "family" farms which have incorporated. If the entire universe of incorporated farms is studied, as was done by the USDA, it is necessary, in fact imperative, to clearly distinguish between incorporated "family" and "nonfamily" or "corporate" farms. "Family" farms could be defined as owner-operated farms, farms employing little or no hired labor, or farms owned and operated by an individual or family who also did the majority of the work (FF).

Initially, it would appear "family" and "nonfamily" farms were distinguished between by the USDA. Incorporated farm operations were classified as to type of owner: an individual, family or other. The tendency has been to equate individual and family owned farm corporations with "family" farm corporations and othe owned with "nonfamily" or "corporate" farms. In terms of past definitions of "family" farms or that suggested by this speaker, these equations would be quite incorrect. There are at least three reasons why it is incorrect to equate indiv dual and family owned farm corporations with owner-operated farms. First, famil owned farm corporations were not necessarily owned by a family. Family ownershi was defined by the USDA as farm corporations with fewer than 10 stockholders, hence was based on number of owners not whether the owners were related by bloo or marriage, as is the usual procedure. In this case, incorporated farms with 9 or fewer unrelated owners, none of which owned a majority and all of which were absentee were classified as family owned farms. This type of farm, however, clearly would not qualify as an owner-operated farm. A second reason why indiv dual and family owned farm corporations cannot be viewed as owner-operated farm is that it appears a high percentage of these farms had individual or family owners who were absentee, hence were not operating the farms they owned. In Wi consin, 18% of the individual and family owned farm corporations were found to

have absentee owners. Certainly it would be inappropriate to equate such farms with owner-operated farms. A third problem is that some farm corporations with 10 or more owners are actually owned and operated by an individual or family. Large families, extended families and the selling of some stock to nonrelatives might result in such a situation. There were 13 such corporations found in Wisconsin (13 per cent of the number of all LSIF's).

Since the USDA classifications were based solely on the type of owner, it was not possible to distinguish between these types on the basis of amount of hired labor (family size versus larger than family size). From other information provided by the USDA, however, it appears more than half of all the U.S. farm corporations would be classified as larger-than-family sized even though approximately 75% were owned by an individual or family. The Wisconsin research found 56% of all individual and family owned farm corporations had 50% or more of their total labor provided by hired workers. It appears if this definition of "family" farm is used, then less than half of all USDA farm corporations would be classified as such.

The USDA farm types have no necessary relationship whatsoever to the four farm types suggested by this speaker. Within each of the three USDA farm types, FF's, TF's, LTFF's or LSIF's could be found. The conclusion reached is that the USDA classification procedures do not distinguish between "family" and "nonfamily" or "corporate" (LSIF) farms. This fact raises questions about the number of "nonfarm", "corporate" or LSIF's found by the USDA, the number of "family" farm corporations found and what the differences are between these two groups of farms.

7. The Classification of Farm Corporations by Types of Business Interests is Uninterpretable

Certainly the occupational and business characteristics of nonfarm corporations and their owners is desireable information to have in assessing a possible increase in nonfarm interests moving into agricultural production. The USDA addressed this question by obtaining information and classifying farm corporations in terms of their business interests. These classifications were: farming only; farming plus agribusiness interests; farming plus non-agribusiness interests, or a combination of all three interests. These classifications, the farms in them and their characteristics are difficult, if not impossible, to interpret, however, since the USDA mixed the business interests of individual corporate owners with the business interests of the corporation. The specific screening questions asked to elicit this information was "Does this person or firm have any other business interests in this country, or elsewhere, in addition to agricultural operations?" If so, the type was determined. An apparent effect of asking this particular question was that other business interests for both the individual owners and the corporation were provided, when available, for those corporations owned by an individual or family; but in the case of other owned corporations, only the other business interests of the corporation were provided. Both types of business interest information would be desireable but they clearly should be kept separate and consistently elicited.

8. The Percentage of All Incorporated Farm Operations Interpreted as Incorporated "Family" Farms Has Been Grossly Overestimated

The common procedure in interpreting the USDA research findings has been to view individual and family owned farm corporations as incorporated "fami farms. Taking this approach, 80% of the farm corporations enumerated by the USD

have been viewed as incorporated "family" farms.[10] It was apparently on this basis Secretary of Agriculture Butz recently stated, "Less than one per cent of our total farms are corporate farms and about six out of seven [86%] of those are family corporation farms. They are really family farms."[11] The implication of statements such as this is essentially to deny the existence of any possible problem by pointing out almost all legally incorporated farms are in actuality "family" farms which have incorporated.

As pointed out previously, however, it clearly is not appropriate to equate individual and family owned farm corporations with "family" farm corporations. An indication of the amount of error involved in making such an equation can be gained from our research in Wisconsin. First, 293 corporations found in both the USDA enumeration and Wisconsin research were cross-classified according to the two methods of classification used. Only one-quarter of the farm corporations owned by an individual were classified as FF's, while an equal percentage were ~~was~~ classified as LSIF's. About 40% were found to be LTFF's. Of the farm corporations owned by a family (9 or fewer owners) 42% were found to be FF's, 3% TF's, 49% LTFF's and 5% LSIF's. Forty-two per cent of the farm corporations owned by others (10 or more owners) were found to be FF's, TF's or LTFF's. Using slightly different criteria for qualified corporations, Table 1 compares the percentage of Wisconsin incorporated farms classified by type for both the USDA and Wisconsin research.

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[10] Agr. Econ. Rep. No. 209, p. 6.

[11] Wisconsin Agriculturalist, Jan. 8, 1972, p. 12.

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TABLE 1

THE NUMBERS AND PERCENTAGE DISTRIBUTIONS OF WISCONSIN AND USDA FARM TYPES FOR THE STATE OF WISCONSIN IN 1968[12]

	Wisc. Enumeration		USDA Enumeration		
Farm Type	N	%	Farm Type	N	%
Tenant	34	6.4	Individual	53	10
Family	182	34.4	Family	336	66
Larger-than-family	211	39.9	Other	123	24
Large Scale Industrial	102	19.3	Unclassified	20	
Total	529	100.0		532	100.0

In interpreting the USDA percentages the normal procedure to date would be to conclude 76% of all Wisconsin farm corporations were incorporated "family" farms. However, if a "family" farm is defined as one owned and managed by an individual or family who also do the majority of the work, then only 34%, not 76% of Wisconsin farm corporations were "family" farm corporations. Only 41% of the Wisconsin farm corporations (TF's plus FF's) use little or no hired labor, another way of defining "family" farms. It is true 74% of Wisconsin farm corporations were owner-operated, but if a "family" farm is defined in this way, then the question has to be addressed of whether owner-operated farms with substantial amounts of hired labor appropriately belong in the "family" farm categor The distinction which has been made between family sized and larger-than-family sized would imply it is not.

[12] Rodefeld, R.D., Wisconsin Incorporated Farms I, ----, op.cit., p. 10 and USDA I Agr. Econ. Rep. No. 142, p. 11.

Obviously, whether 34 to 41% of all farm corporations are found to be "family" farms or 80 to 86% will effect the extent to which "nonfamily" incorporated farms are viewed as a possible problem. No problem exists in this regard if almost all farm corporations are found to be "family" farms. If on the other hand, a high percentage of all farm corporations are found to be "nonfamily", then at least the possibility exists that this situation will be viewed as a problem or the likelihood is greater it will be viewed as a problem. A high percentage of incorporated farms were reported by the USDA as "family" because LSIF's, LTFF's and TF's were also included in this category in addition to FF's.

9. The USDA Classification Procedures Reduced the Apparent Amount of Difference Between "Family" and "Nonfamily" Farm Corporations

TABLE 2

AVERAGE ACRES OPERATED BY TYPE OF FARM CORPORATION FOR THE WISCONSIN (N=529) and USDA (N=532) SURVEYS FOR 1968 and 1967, RESPECTIVELY

Wisconsin Enumeration		USDA Enumeration	
Farm Type	Average Acres	Farm Type	Average Acres
Tenant	296	Individual	604
Family	549	Family	622
Larger Than Family	918	Other	924
Large Scale Industrial	2,049		
Total Average	969		691

While a 302 acre difference existed between family and other owned corporations in terms of average acres operated, there were 1,500 and 1,131 acre differences betwwen FF's, LTFF's and LSIF's, respectively. While family owned corporations operated an average of 48% fewer acres on the average than other owned corporations, FF's and LTFF's operated 273% and 122% fewer acres than LSIF's, respectively. Other owned farm corporations comprised 24% of all USDA Wisconsin corporations and operated 32% of all land operated by farm corporations. On the other hand, LSIF's comprised 19% of all Wisconsin farm corporations and opeated 41% all land operated by farm corporations. While acres operated was used as an example, undoubtedly similar findings would be found for other incorporated farm characteristics.

The USDA classification procedures not only resulted in an inflated percentage of "family" farm corporations, they also resulted in the observation of small differences between farms interpreted as "family" and "nonfamily" farms. At the national level, for instance, one group of 22 states had 81% of all farm corporations classified as "family" farm corporations. These "family" farm corporations controlled 80% of the land operated by farm corporations in these states. The same percentages for another group of 25 states were 79% of the corporations and 75% of the land operated. While other owned farm corporations were always larger on the average than individual or family owned farm corporations, on a proportionate basis, the differences were not great. In Wisconsin, for instance, other owned farm corporations operated only 33% more acres on the average than those family owned. The major conclusions following the USDA procedures are most incorporated farms are "family" farms and little difference exists between these farms and "nonfamily" farm corporations. With this approach, not much of a problem appears to exist, nor are there many reasons for being concerned with "corporate" farms.

On the other hand, this situation can be compared to Wisconsin where only 34% of the farm corporations, controlling only 20% of all land operated by farm corporations, were classified as family type farms (FF). Furthermore, these farms operated 273% fewer average acres than farm corporations classified as LSIF's. With this approach, "family" farm corporations are a distinct minority of all corporations with agricultural production and are a great deal smaller than those farms classified as "nonfamily" or "corporate".

The major explanation for these differences, of course, is the fact LSIF's and LTFF's were classified by the USDA in the family owned category. Since these farms were larger on the average than FF's and TF's, the average characteristics for family owned corporations were increased reducing the amount of difference between family and other owned corporations. Furthermore, TF's and some FF's and LTFF's were included by the USDA in their other owned category. Since these farms were smaller than LSIF's, the overall averages for other owned farm corporations were reduced, again reducing the amount of difference between family and other owned farm corporations.

10. The Enumeration of Farm Corporation on a County, State and Corporation Basis Inflated the Number of "Nonfamily" Farm Corporations and Reduced the Amount of Apparent Difference Between "Family" and "Nonfamily" Farms

The procedure followed by the USDA was to enumerate and group all of a corporation's operating units on a county basis for each state. What this means, of course, is that if a corporation had agricultural operations in five counties within a state, five corporations were enumerated, not one. Furthermore, if the same corporation had operations in other states, these also would be enumerated on an individual county basis. The USDA maintained only a few such operations were found. In Wisconsin, however, 39% of the incorporated LSIF's were found to have agricultural production in more than one county and 22% had agricultural

operations in more than one state. While this point will not affect the totals (acreage, etc.) observed for the different types of farm corporations, this phenomenon if very widespread and associated with one particular type of farm, will affect the number of such corporations found and the magnitude of differences observed between the different types for average per farm characteristics. Undoubtedly, most of the Wisconsin incorporated LSIF's with operations in more than one county or state had 10 or more stockholders, thus, would have been classified as "other" owned corporations. Most incorporated family type farms on the other hand, were classified as being owned by a family. Only 10% of the incorporated Wisconsin FF's, however, had agricultural operations in more than one county and only 3% had agricultural operations outside the state (versus 39 and 22%, respectively, for LSIF's).

If this type of difference is also found for other states, then the number of other owned corporation farms has been overestimated, and the average differences between these farms and those family owned will be greater, perhaps by a great deal for the other states and for the nation as a whole. Furthermore, this type of phenomenon, if widespread, would also have implications for the concentration of production observed within product areas.

As an example of what might be involved here, assume there are 100 family owned corporations operating 50,000 acres or 500 acres per farm, and there are 100 other owned corporations operating 100,000 acres or 1,000 acres per farm. Next assume that instead of 100 separate other owned corporations, there were only 50 in reality. The acreage operated would remain the same, but the acres operated per farm would increase to 2,000 acres. This is exactly the same type of mechanism operating vis-a-vis multi-county and state operations.

Another procedure followed by the USDA would have similar effects to that of enumerating farm corporations by counties and states. This is the fact that the same individual, family, unrelated individuals or other corporations may own multiple farm corporations. Each such corporation was, of course, counted and described separately. While it is clear this type of pehnomenon exists, little or no data exist on how widespread this pattern might be. If it is found to be disproportionately associated with other owned corporations, it will reduce the amount of average per farm difference between these corporations and family owned farm corporations, and the number of corporations enumerated will be greater than the number of corporate farm owners.

11. While Some Trend Data Was Presented, It Was Uninterpretable

Problems of enumeration and information accuracy and the inability to distinguish between "family" and "nonfamily" corporations suggest this conclusion. For a group of 22 states, about 50% of all corporations had incorporated in the period from 1960-68. What were the percentages, however, for incorporated FF's, TF's, LTFF's and LSIF's? This is not known. Another shortcoming of this approach in assessing trends is even if accurate information was available, it is not known how many farm corporations are being discontinued. All that is known is the gross growth rate, not the net.

12. Conclusions

On the basis of the preceding comments, I do not think the USDA survey should be used as a source of descriptive data about either "corporate" farms, "nonfamily" farm corporations or legally incorporated farms generally. Major questions exist not only about the accuracy of this research, but also the procedures followed in enumerating and classifying farm corporations.

The major effect of a number of the procedures followed has been to reduce the absolute characteristics of "corporate" or "nonfamily" corporation farms and reduce

the apparent amount of difference between "family" and "nonfamily" farm corporations. Both of these outcomes, it would seem, would work in the direction of reducing the extent to which "corporate" or "nonfamily" farm corporations might be viewed as a possible problem and/or threat to "family" farms and society as a whole.

B. The 1969 Census of Agriculture and the USDA ERS Survey Compared

In 1969, corporations with agricultural production were identified by the Census of agriculture. Undoubtedly, in the future, the Census of Agriculture will become the basic reference source for descriptive information about legally incorporated farm operations for the nation, individual states and counties. As such, it is important to understand what types of information will be available from this source, and what problems might be associated with the interpretation of this information. The 1969 Census of Agriculture will be compared to the USDA survey of incorporated farms since these are the only two sources of nation-wide data on legally incorporated farm operations.

1. The Problems of Enumeration and Information Accuracy Should be Greatly Reduced

The Census of Agriculture used a mail-out procedure in 1969 where the forms were sent to the farm owners (absentee and nonabsentee and tenant operators). Their mailing lists were compiled from a variety of sources such as the IRS, ASCS, Social Security and past Census'. The major goal of the census, of course, is to enumerate all farms. The extent to which this was accomplished was also, probably, the degree to which all farm corporations were identified. Assuredly, the enumeration accuracy was much higher than that observed for the USDA survey. The information obtained about farm operations should also be much higher in accuracy, since the owners (or tenants share-croppers) provided the information, instead of someone not connected with the operation as was the case with the USDA survey.

2. A Greater Quantity of Information Was Obtained With Greater Detail

Examples of information obtained by the census, but not the USDA were: conservation practices followed, production and marketing contract information, machinery characteristics, production expenses and farm owner (or tenant-sharecropper) characteristics such as age, race, off-farm work and place of residence. More detailed information was obtained on acreage, types and quantities of production, and market values of production.

3. Some of the Same Problems of Interpretation Are Found

The Census of Agriculture has divided farm corporations into two groups: those with 10 or fewer shareholders and those with more than 10 shareholders. For all practical purposes, these classifications are exactly the same as those used by the USDA; hence, 10 or fewer shareholders will equal corporations owned by an individual or family (9 or fewer shareholders), and those with more than 10 shareholders will equal those USDA farm corporations with other (10 or more shareholders) owners. If no further distinctions are made between these two categories of farm corporations (through special tabulations), exactly the same problems of interpretation and effects will be found for the Census of Agriculture information as was found for the USDA ERS survey. These problems will be briefly summarized.

a. Legally incorporated farms are not analagous to "corporate" farms

If "corporate" farms are defined as LSIF's, then not all such farms have been included by the census in their categories of legally incorporated farms. The number of LSIF's will be greater than that found and inferred from the category of more than 10 shareholders. This problem could be overcome, somewhat, through special tabulations.

b. It is not possible to distinguish between "family" farms which have incorporated and incorporated "nonfamily" or "corporate" (LSIF) farms

As with the USDA survey, it will not be possible to distinguish between incorporated "family" and "nonfamily" farms. The tendency undoubtedly will be to equate those corporations having 10 or fewer shareholders with "family" farms, and those with more than 10 shareholders with "nonfamily". This will be incorrect, however, for the same reasons pointed out for the USDA survey. Thus, farm corporations with 10 or fewer shareholders will include: owner and nonowner operated farms, farms with little and a great deal of hired labor, and generally FF's, TF's, LTFF's and LSIF's. Many of these specific types of farms have not been viewed as "family" farms in the past. Hence, this census category should not be equated with "family" farm corporations. All of the same specific types of farms will also be included in the census category of more than 10 shareholders, hence this category is not uniformly comprised of "nonfamily" corporation With the type of classification used by the Census of Agriculture for incorporated farms, it is in fact inappropriate to talk about incorporated "family" and "nonfamily" farms. Again, this problem can be overcome somewhat through special tabulations, since information was obtained on whether the owner lived on or off the farm and the number of hired workers.

c. The percentage of all corporate farm operations viewed as incorporated "family" farms will be overestimated

If interpreters of the census information on corporate farms follow the same procedure as they followed for the USDA survey, an extremely high percentage of all farm corporations will be viewed as incorporated "family" farms. This outcome will be a result of equating corporations with 10 or fewer shareholders with "family" farm corporations. As with the USDA survey, however, this will be an incorrect equation. If the incorporated farms had been classified differently

I am quite sure a distinct minority of all such corporations would be FF's or farms employing little or no hired labor (FF's and TF's). Most would be found to have hired managers and hired workers (LSIF's) and/or be farms employing large amounts of hired labor (LTFF's or LSIF's). Unfortunately, however, when the census findings are made public, I am sure the headlines will read "Almost all Farm Corporations Family Farms". I would expect something on the order of 80% of all farm corporations to have 10 or fewer shareholders. Undoubtedly, this type of information will be presented as evidence denying the existence of any problem with "corporate" farms by maintaining a very high percentage of all incorporated farms are "family" farms which have incorporated.

d. The classification of farm corporations will reduce the apparent amount of difference between those farm corporations viewed as "family" and "nonfamily"

As with the USDA survey, I suspect the census will find and report relatively small differences between farm corporations with 10 or fewer or more than 10 shareholders for most farm characteristic averages. Furthermore, relatively small differences will be found between their percentages of all incorporated farms and their percentage of totals for various farm characteristics, such as the percentage of all land operated by corporate farms. The reasons or explanation for the reduction of such differences will be exactly the same as those for the USDA and will not be repeated here. The effects will probably also be the same; i.e., the lack of large relative differences will be used as evidence to support the claim no "corporate" farm problem presently exists.

e. The enumeration procedures will inflate the number of farm corporations above that found by the USDA and will probably reduce the amount of difference between "family" and "nonfamily" farm corporations

If the USDA survey had had high levels of accuracy, the previous statement quite assuredly would be true. Because of possible accuracy problem, I

am not sure the latter part of this statement will be observed. The title statement is based on differences in enumeration procedures followed between the two research efforts. Thus, for the USDA it was pointed out, farm corporations were enumerated on a county basis. All the operating units within a county were aggregated, but other operations of the same corporation in other counties or counties in other states were counted separately. The outcome of this procedure was to inflate the number of corporations found, reduce average corporate farm characteristics and reduce the amount of difference in average characteristics between those farm corporations interpreted as "family" and "nonfamily". These effects were increased by the Census of Agriculture because all separate operating units were enumerated, thus different units of the same corporation were not combined even when found in the same county. This procedure will result in more separate corporations reported by the census than the USDA. The largest difference in number should be found between USDA other owned corporations and those Census of Agriculture farms with more than 10 shareholders. This census procedure will also result, however, in decreased average corporate farm characteristics, especially for those with more than 10 shareholders; hence will reduce the amount of difference in average farm characteristics between those corporations with 10 or fewer and more than 10 shareholders. As with the USDA, similar effects are also brought about because farm corporations were not combined on the basis of ownership, thus even though the same persons or the same corporation owned a number of separate farm corporations, each was enumerated separately. Another effect of procedures such as this is to make an accurate assessment of concentration of land ownership and production on the basis of the published census data impossible at the county, state or national levels. To obtain an accurate picture would require that all farms owned by the same persons or corporations be combined at the county, state and national levels.

4. Information About Trends in Farm Types

Probably the best source of information on changes in the numbers and characteristics of farm types has been the Census of Agriculture. Long time-series exist with farms classified by type of operator: owner (part and full), hired manager and tenant. This information shows, for instance, that while hired manager farms decreased by a quarter in number from 1950 to 1964, average farm size increased from 3,439 acres to 4,146 acres, their average value of land and buildings increased from $128,221 to $564,998 and average value of products sold increased from $54,592 to $163,117.[13] Hired manager farms are the closest approximation to LSIF's which can be obtained from existant census data. It is rather ironic that at the very time concern has been greatest with absentee owned farms, with hired managers and hired workers and the need for information about these farms the greatest, the Census of Agriculture decided to discontinue presenting information on hired-manager farms.

Farms are now classified in two ways: by the type of owner (individual or family, partnership, corporation or other); and by the characteristics of the land operated (all owned-full owner, some owned and some rented-part owner, or all rented-tenant). All hired manager farms in 1969 were classified as to the type of owner and according to whether those owners, owned all, some or none of the land operated. Since information apparently was not obtained on whether the farms had hired managers, it appears farms with absentee owners, hired managers and hired workers (LSIF's) will not be identifiable even with special tabulations. It will be possible to cross-classify farms by residence of owner (on-farm, off-farm) and number of hired workers (high-low), so it will be possible to obtain approximations to the farm types suggested by this author (FF, TF, LTFF and LSIF) in a special tabulation.

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[13] Land Tenure In The United States ----, op. cit., p. 15.

5. No Information Was Obtained on the Business Interests of the Corporations Owners or the Business Interests of the Corporation

While the USDA did attempt to obtain this information, no attempt was made in this area by the Census of Agriculture. Without this information, however, it is not possible to assess or determine which types of corporations are moving into agriculture or what the occupations or business connections of corporation owners are, and where these owners might be located.

6. Conclusions

While the 1969 Census of Agriculture has eliminated the accuracy problems associated with the USDA survey, the same problems of interpretation are found, stemming from the way in which farm corporations were classified. One advantage of the Census material is that special tabulations can be carried out with farms classified different from those used initially. I do, in fact, think such tabulations should be made and would suggest farms be classified by the four types I have suggested. Without special tabulations the major conclusions about the absolute and relative characteristics of "family" and "nonfamily" farm corporations will be highly similar to those from the USDA survey.

IV. Some Characteristics of Wisconsin Incorporated LSIF's

As Professor Wilkening pointed out earlier, we have carried out rather extensive research on incorporated Wisconsin farms. It was possible in this research to obtain information about these farms, their owners, managers and workers not obtained by the USDA in its survey or by the Census of Agriculture. Following are some of the findings of this research which might be of interest to you.[14]

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[14]This information is summarized from: Wisconsin Incorporated Farms I: ----, op.cit.

A. FF's had an average total work force of 4.2, versus 13.7 for LTFF's and 15.6 for LSIF's.

B. LSIF's were located in areas and on farms with lower soil quality and fertility than FF's and LTFF's. This was also reflected in LSIF per acre market values two to three times lower on the average than those for FF's and LSIF's.

C. Over half of all FF's and LSIF's, and 42% of the LTFF's planned to expand the size of their operations in the future if land was available.

D. Major differences existed between the types of farms in their areas of production for sale, percentage of production accounted for and acreage characteristics.

E. Twenty-one per cent of the FF's had sales in 1968 exceeding $100,000 while this was true for 54% of the LTFF's and 57% of the LSIF's.

F. FF's had an average net worth (gross worth or value minus total indebtedness) of $183,580, while LTFF's averaged $332,738 and LSIF's $462,055.

G. Eleven per cent of the FF and 26% of the LSIF corporations had nonagricultural activities which ranked first in sales.

H. About one-third of the LSIF corporations had business interests in addition to agricultural production. About half of these were involved in the processing of agricultural products, while 41% were not related to agriculture.

I. Only about one-quarter of the LSIF's had evolved from FF's or LTFF's. The remainder originated from outside of farming.

J. About 90% of the FF and LTFF major stockholders started their occupational careers in farming. This was true for only 33% of the identifiable LSIF major stockholders and only 19% presently had a farm occupation.

K. Two-thirds of the identifiable major stockholders of LSIF's were owners or executives of nonfarm businesses and about 20% were professionals.

L. One-third of all LSIF's had begun agricultural production since 1964.

V. Some Aspects of Corporate Secrecy Hindering Effective Research

A more appropriate title for this section, perhaps, would be "Problems in carrying out research on corporations with agricultural production." One of these problems is, in fact, corporate secrecy, but other problems also exist not directly related to corporate policy.

A. It is extremely difficult to identify corporations with agricultural operations. Where such enumerations have been made, such as the census, corporation names and addresses are inaccessible. In Wisconsin 50,000 corporation tax records had to be reviewed in an attempt to identify those with agricultural operations. This was an expensive and time consuming process. If "corporate" farms are defined as LSIF's, these farms are even more difficult to identify. Obviously, if farm corporations or LSIF's can't be identified, neither the farms or their owners and personnel can be studied.

B. Even if corporations are identified, it is difficult, if not impossible, to get their stockholder lists and the percentage of stock owned by each stockholder. In most cases, this information would have to be obtained from the corporation's personnel. It is questionable how readily this information would be provided. Without this information, major stockholders could not be identified or studied.

C. Since social scientists do not have the force of law behind their research efforts, the good will of corporation personnel must be relied upon to cooperate and provide accurate and complete information. While this has not been a major problem in our research to date, I suspect the greater the amount of unfavorable publicity given to "corporate" farms, the greater the resistance will become.

D. At present, it is almost impossible for individual researchers to assess the total characteristics of corporations with operations in more than one state. The only realistic possibility is that perhaps the Census of Agriculture could compile this from information it possesses.

E. While this discussion so far has been concerned with corporations, another question perhaps even more important for some purposes is "who owns America's farms?" or more specifically "who are the individuals who own America's farm land, and what are their characteristics?" To my knowledge, this question has never been adequately answered. The Census of Agriculture, for instance, in the past has enumerated farm operators, not owners. Thus, the owners of hired manager farms and tenant farms have not been enumerated. Even with the changes in the 1969 census, tenant farm owners were not enumerated. Farms also have been enumerated on an operating unit basis,not in terms of all farms with the same owner.

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These problems are even greater if corporations are dealt with. In order to assess individual ownership, the names of corporation stockholders would be necessary along with their percentage of stock ownership. This information would also be necessary to aggregate all land owned by different corporations with the same stockholders or the same major stockholders. Since land has not been aggregated on an ownership basis, we really have no good idea of what the levels of land and agricultural production concentration are at this time for the nation as a whole or for individual states.

VI. Wisconsin Research Results Suggestive of Community Effects Associated With A Change from "Family" to "Corporate" (LSIF) Farms

It was suggested earlier that a change from "family" to "corporate" (LSIF) farms would or might be accompanied by three specific changes in farm characteristics with community implications. These specific characteristics were: absentee farm ownership; the man: land ratio and the composition of the rural farm work force. Limited information was obtained in the Wisconsin research on what independent effects might be associated with a change from nonabsentee to absentee farm ownership. Information was obtained, however, suggestive of what changes in the man: land ratio and the rural farm work force composition would accompany a change from "family" to "corporate" (LSIF) farms and what the effects of these changes might be.

A. Changes in the Man: Land Ratio and Possible Effects

Detailed information was obtained in the questionnaire survey of Wisconsin incorporated farms on the size of each farm's work force and acreage characteristi With this information, it was possible to estimate the man: land ratios of all incorporated farms by type of farm. In Wisconsin, the incorporated FF total work fo (owners and family, hired full-time workers and seasonal man year equivalent [MYE] workers) was found to operate an average of 86 crop acres per man, while the incor

porated LSIF total work force (hired mangers full-time and seasonal MYE workers) operated an average of 117 crop acres per man. The averages per man for full-time owners, hired managers and workers were 140 acres for FF's and 206 acres for LSIF's. These latter figures would indicate 32% fewer managers and full-time workers were required for each crop acre by LSIF's than FF's.[15] While type of production was not controlled, such a procedure should increase the differences since LSIF's were disproportionately found in more intensive types of production. While these figures undoubtedly reflect higher levels of productivity per manager-full-time worker for LSIF's, they also indicate rural depopulation will be great in a change from FF's to LSIF's, unless offset by other forces. If the change is from average FF's to LSIF's, the loss will probably be even greater since the incorporated FF's averaged 335 acres each, while the average for the state was 101 acres.[16] This change in the man: land ratio and resulting population loss will have a number of independent community effects associated with it, all other factors constant. Some of the more important of these changes or effects will be:

1. The number and variety of voluntary, special interest organizations will decline.

2. An absolute decline in church membership and contributions, and perhaps the number and variety of church related organizations and activities.

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[15] Rodefeld, R.D., "Farm Types As Related to the Question of Enhancing and Preserving Rural Communities", an unpublished (MI), presented as testimony before Governor-elect Patrick Lucey's Budget Hearings, Eau Claire, Wisconsin, December, 1970, p. 19.

[16] Rodefeld, R.D., Wisconsin Incorporated Farms I: ----, op. cit., pp. 16-17.

3. A reduction in rural farm political power not only locally but also at the congressional, state and federal levels.

4. Increased abandonment of farmsteads with a resultant decrease in local tax revenue.

5. An absolute decline in the quantity or volume of personal and family related goods and services purchased and possibly farm related goods and services.

6. A decline in the number and variety of community businesses.

7. Increased concentration of land ownership.

While these would seem to be the major effects of a declining man: land ratio, any outcome of rural depopulation could be added to this list.

B. Changes in the Composition of the Rural Farm Work Force and Possible Effects

The general concern here is with the nature of the relationships between the farm population and the community within which they reside. These relationships could have as their referrents other individuals or community organizations and institutions. A change from "family" to "corporate" (LSIF) farms by definition will drastically alter the composition of the rural farm population. Resident farm owners and their families will be replaced by hired managers, workers and their families. Major community effects or changes could accompany such a change in farm types if the two populations ~~are~~ were found to vary in the nature of their relationships to the communities within which they reside. The information in Table 3 suggests such differences may well exist.

TABLE 3

Average Community Related Characteristics of Wisconsin Incorporated FF Owners, Hired Full-Time Workers and LSIF Managers, 1970[17]

	FF Owner (38)	Full-Time Worker (70)	LSIF Manager (27)
Descriptive Information (Respondent)			
Age	45.3	42.0	45.0
Years of education	11.6	10.2	11.9
Years lived in community	34.8	19.6	18.5
Magazines and newspapers subscribed to	8.8	3.4	8.3
Voluntary Organization Membership			
Total (Respondent)	2.9	.4	1.5
Total (Husband and Wife)	3.5	.6	2.4
Total (Family)	6.1	1.9	6.4
Number of school activities (Children)	5.2	3.2	5.9
Church Related Characteristics			
Per cent members	84.0	84.0	96.0
Contributions per week	$ 7.18	$ 2.10	$ 7.87
Political and Public Leadership Participation			
Per cent with a "great deal" of interest in local politics	32.0	10.0	26.0
Number of 11 political activities participated in	4.2	1.0	4.3
Per cent of 8 recent elections eligible for and voted in	80.5	48.3	69.0
Number of 11 public leadership positions ever held	.70	.17	.81
Economic Characteristics			
Gross family monthly income	$3574	$ 621	$ 1765
Net family monthly income	987	517	948
Net worth (gross worth minus indebtedness)	$123,850	$ 15,876	$ 61,675

TABLE 3, continued

	FF Owner (38)	Full-Time Worker (70)	LSIF Manager (27)
Level of Living (Number of 20 items possessed)	16.6	13.4	15.9
Support of Local Businesses			
Per cent of 11 personal goods bought locally when available	56.4	56.5	62.4
Per cent of 11 farm goods bought locally when available and applicable	55.0		43.6

It was found in the Wisconsin research that approximately 88% of the incorporated LSIF work force was composed of hired workers (76% full-time) and 12% hired managers. The major comparisons in Table 3, then should be between FF owners and hired full-time workers. A comparison of the average community related characteristics of these two groups suggests the following community effects would accompany a change from FF's to LSIF's, all other factors constant:

1. Levels of age, education, residential stability and information possessed will decline.
2. The number and variety of voluntary organizations will decline and the support of extra-curricular school activities will decline.

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[17] The figures appearing in this table were derived from E.A. Wilkening and R.D. Rodefeld, Wisconsin Incorporated Farms II: Characteristics of Resident Owners, Hired Managers and Hired Workers, Center for Applied Sociology, (MI) Department of Rural Sociology, University of Wisconsin, Madison, December, 1971 and previously unpublished data.

3. Church membership will remain about the same but contributions will decline.

4. Interest in local political issues will decline and political participation will decline.

5. Economic stratification will increase, level of living will decline, and the amount of revenue available to be spent in the local community will decline.

6. Little change will occur in the extent to which personal and family related goods and services are purchased in the local community.

C. Conclusions

Differences in the man: land ratios of FF's and LSIF's and differences in community related characteristics of the work forces associated with these two farm types suggest rather major community effects will accompany a change from one type to the other, all other factors constant. The magnitude of the effects will vary depending on the size of the community's population center (or the proportion of the community's population rural farm), the proximity of the community to larger population centers, and the amount of nonfarm employment available. The magnitude of the effects will be even greater to the extent LSIF's employ seasonal or migrant workers rather than full-time year round hired workers.

D. Effects Associated With Other Farm Type Changes

If these are in fact the major causal variables at the farm and community level, then a number of additional interesting questions are suggested. For instance, what effects would be brought about in communties where "family" farms were replaced with LTFF's? This is a legitimate question since it appears there is a trend toward larger-than-family farms as defined by amount of labor hired. For instance, these farms accounted for 30.4% of all farm sales in 1959 and 35.4% in 1964. Their percentage of all farms increased from 4.5% to 4.9% in the same

time period.[18] Eighty-nine per cent of the incorporated LTFF work force was found to be composed of hired full-time and seasonal man year equivalent workers, almost exactly the same as for LSIF's.[19] The man:land ratio for this type of farm also will undoubtedly be found to be more similar to that of LSIF's than FF's. To the extent these two characteristics of LTFF's approximate those for LSIF's then the same community effects a function of these characteristics will also be observed. The only major difference between LTFF's and LSIF's is that LTFF's do not have absentee owners; hence, the effects a function of this characteristic will not accompany LTFF's. The point, however, is that the bulk of community effects associated with a change from FF's to LSIF's might also occur with a change from FF's to LTFF's. Ideally, research should be carried out on the effects of this latter change also.

Another point worth making is that FF's are also getting larger and have a decreasing man:land ratio. Even if all farms other than FF's were not allowed, rural depopulation unless off-set by other forces, would still occur along with the community effects a function of population loss. An important point, however, is that population loss will be minimized with either FF's or TF's, and FF's will not have those effects associated with absentee ownership and a high proportion of the work force which is hired workers.

VII. Comments on Professor Goldschmidt's Study of Arvin and Dinuba

As pointed out earlier, Professor Goldschmidt's 1946 study of Arvin (large farm) and Dinuba (small farm) has been the only study which has directly addressed the question of what effects would accompany a change from "family" type farms to

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[18] Nikolitch, Our 31,000 Largest Farms, op.cit., p. 39.

[19] Rodefeld, R.D., Wisconsin Incorporated Farm I: ----, op.cit., p. 75

"nonfamily" or "corporate" farms. Given the basic interrelationships between a community's population center (especially smaller centers) and the farms in the community's hinterland, I find it quite surprising so little research has been carried out on the nature of this relationship. If such research had been carried out, we would be in a better position to specify what effects at the community level, under what conditions, would accompany a change from "family" to "corporate" (LSIF) farms.

The major findings of Professor Goldschmidt's research are well known and will not be repeated here. Instead, the applicability of this research to the contemporary concern with "corporate" (LSIF) farms will be examined. First, studies such as Professor Goldschmidt's should be carried out in other regions of the country to test the generality of his findings. The communities and region studied by Goldschmidt vary in significant ways from most parts of the country. For instance, the types of production were very labor intensive (grapes, fruit, vegetables and cotton), large numbers of seasonal or migrant workers were used and irrigation was used. Would the same general effects of a change from "family" to "corporate" (LSIF) farms be observed in other regions of the country with different characteristics, for instance, the corn, wheat and dairy belts? Would the magnitude of the effects be the same?

Second, Goldschmidt controlled on certain factors which themselves will influence the extent to which farm changes have an effect on the total community. For instance, how would the effects observed by Goldschmidt been affected if the population centers had been larger and the rural proportion of the total community population lower? How might these effects been modified if the communities had been within commuting distance of larger population centers?

Third, in controlling for population size, land in farms and types of production to a lesser degree, Goldschmidt essentially controlled for the population density

or man:land ratio of the community's rural hinterland. I have suggested one of the major changes from FF's to LSIF's might, in fact, be a reduction in the rural farm population density. Since this change would have major community implications on its own accord, research should determine whether ~~or not this is true,~~ LSIF's have a lower man:land ratio, and what the magnitude of this reduction might be. This should be done for all major regions and/or types of production.

Fourth, while scale of operation was isolated by Goldschmidt as the major causal variable, the specific farm characteristics given greatest causal significance were the proportion of the total work force wage-laborers and the proportion of farms absentee owned or tenant operated. What are the independent effects, and relative weights, of these variable, however? To what extent, for instance, would the same effects been observed in Arvin had the proportion of absentee ownership been the same as in Dinuba, but the proportion of the work force wage-laborers remained the same? If absentee ownership, man:land ratio and occupational distribution are viewed as three of the more important farm characteristics affecting community characteristics, what are the independent effects of variations in each?

Fifth, a good deal more must be known about the causal relationship between the proportion of the work force hired laborers and community characteristics. Goldschmidt suggests levels of income, education, residential stability and community loyalty might be among the more important variables here. If this is true, as these characteristics increase over time, the community situation shoul improve. But how much? Which variables are most important? To what extent wil such improvements off-set the ~~initial~~ in loss which occurs when FF's are replaced by LSIF's?

It would also be desireable in future research to study specific communities, where a change had occured from "family" to "corporate" farms. Professor Goldschmidt attempted to determine what effects would accompany such a change by comparing the characteristics of two communities at one point in time which varied in their farm types but were similar in other basic characteristics. This procedure, even when as well done as by Professor Goldschmidt, has its reservations and shortcomings. The surest and least questionable procedure is to moniter the effects of such a change as it occurs within a community. Another similar procedure would be to find communities where a change had occured from "family" to "corporate" farms and carry out a social and economic reconstruction of the community characteristics preceding and following the change.

VIII. Proposed Research to Determine the Effects at the Community Level of a Change from "Family" to "Corporate" (LSIF) Farms.

A. The Problem

It would appear that if present conditions remain unchanged, a high probability exists family type farms will increasingly be replaced by "corporate" or large-scale-industrial type farms. As this change proceeds farms owned, managed and worked by families will be replaced by farms with absentee owners and non-owning hired managers and workers. There is reason to believe one of the major concommitants of this change will be a decreasing man:land ratio. The findings of Professor Goldschmidt and the Wisconsin research suggest this change in farm type will result in numerous effects at the community level. These effects will probably become greater the smaller the community is. No research has been carried out, however, in communities which have actually experienced a change from "family" to large-scale-industrial type farms.

Because neither of the communities studied by Goldschmidt had actually experienced a change in farm types certain questions could not be answered. For instance, if the small farms in Dinuba had actually been replaced by farms like those in Arvin there is reason to believe the community of Dinuba would become similar to Arvin. But how similar? The social and economic patterns and institutions of Dinuba would be expected not only to resist the effects of such a change in farm types but also would employ adaptive mechanisms to lessen these effects. Since Dinuba had not experienced such a change we do not know what adaptive mechanisms would be employed, hence we do not know how similar to Arvin, Dinuba would become. Furthermore, Goldschmidt's study provides no insight as to the process through which the family farms of Dinuba would or might be replaced with farms like those in Arvin. What would cause the family farmers of Dinuba to stop farming? Were they forced out because of economic reasons? Did their owners retire or die? Or, were they induced to sell by a high offer for their farm? Perhaps the present family farms of Dinuba are evolving over time to become more like those in Arvin. To answer such questions longitudinal studies of communities which have experienced a change in farm type should be carried out.

The approach taken in the Wisconsin research is also inadequate to answer questions about the effects accompanying a change from FF's to LSIF's. Statement can be made about community change with this approach if certain assumptions are made, such as, all other conditions equal or constant. In real life, of course, these other conditions do not usually remain constant and are usually interrelate in complex ways. Information from individuals can be suggestive of what the effe of varying conditions are and what the nature of the interrelationships might be but they will remain as tentative hypotheses until they are subjected to testing in an actual change situation.

Another problem with statements about community change derived from individuals is the contextual fallacy, i.e., inferring the properties and behavior of collectives from the characteristics of individuals. It is inappropriate, for instance, to suggest a population of LSIF managers and workers in a specific community will have the same community related characteristics as those observed from a random sample of all such managers and workers in the state or nation as a whole.

What is needed is longitudinal studies of specific communities where a change has occurred in the hinterland from "family" to large-scale-industrial type farms. Two such types of studies could be carried out with this approach. First, the characteristics of the community before the change occurred would be assessed. As the change in farm types took place the community effects of the change would be recorded. When the change was completed the characteristics of the community before and after the change could be compared. A second approach would be to reconstruct the relevant characteristics of the community before the change occurred and compare them to the characteristics observed after the change had taken place. The first approach is the ideal, while the second is the more realistic.

B. Proposed Research Design: Four Communities would be selected using the following criteria.

1. They would be located in the Midwest-Great Plains regions.

2. They would have experienced a significant FF to LSIF change in the last 10-15 years.

3. They would have approximately the same size population centers. They would probably be selected within a range of from 1,000 to 5,000.

4. They would vary by the major type of agricultural production in the rural hinterland. For the regions suggested these would be: dairy, livestock, grain and vegetables - canning.

5. They would be located away from major metropolitan centers.

C. Rationale for Proposed Research Design.

While it would be desireable to study changes from FF's to LSIF's in all U.S. regions there are some reasons why this change should particularly be studied in the Midwest-Great Plains region. The major reason is that the proportion of all farms which are FF's is greatest for these regions at this time. Thus, the magnitude of the effects associated with a change from FF's to LSIF's would probably be greater for these regions than any other. Assuredly the magnitude of the effects of such a change would be greater than if the farm change was from LTFF's to LSIF's. These regions also account for the greatest percentage of the value of all farm products sold and are second in the number of farms and rural people (the South is first).

As Professor Wilkening has pointed out there are undoubtedly few communities in the Midwest or Great Plains composed entirely of LSIF's. Given this fact, it is quite unlikely any communities will be found in these regions where a change has occurred from a predominance of FF's to a predominance of LSIF's. However, I do think communities can be found where within the last 10-15 years one or a number of extremely large LSIF's have replaced FF's. I know of one such farm myself of approximately 5,000 acres which replaced 30-35 former FF's. This should be a large enough change so that if, in fact, major effects are associated with a change from FF's to LSIF's they should be observable.

Given the larger numbers and importance of LSIF's in other regions of the country it is tempting or would appear easier to carry this research out there. There will be two problems, however, with such research. First, because of the differences in types of production (highly intensive [fruit, vegetables, etc.] or highly extensive [cattle racches]), types of hired workers employed (large input of migratory workers) and historical tenure patterns there will be major problems of generalizing from such research to the Midwest and Great Plains.

Second, even though more LSIF's are found in other regions I would suspect that most of them have been that way for a long time or have replaced LTFF's. It actually might be more difficult in these regions to identify communities where a recent major change had taken place in terms of FF's being replaced by LSIF's. A 10-15 year time period is specified since the shorter the specified time period the greater the ease will be of obtaining information on the characteristics of the community before the change took place.

It would be important to control on size of population center to reduce the effects associated with variation in that characteristic. The predominant types of agricultural production have been selected as representative of the major types of production in the region. This will also allow an assessment to be made of the relationship between type of production and the magnitude of the effects accompanying a change from FF's to LSIF's. The effects of such a change might be greater, for instance, for dairy areas than grain areas. The approach suggested here will not only discover any such relationships but should also be able to explain why the differences occurred. Ideally, the communities studied would be located away from metropolitan centers since this is true for the majority of rural people and the confounding effects of close proximity to such centers can be controlled.

D. Methodological Procedures: Major Groups Studied

1. Personal interviews

   a) Former FF owners or relatives (if deceased)

   b) Present workers and or residents on LSIF's

   c) Family farm control group: matched with former FF's

   d) Selected local business owners and representatives of community institutions

2. Questionnaires

   a) Former FF owners (or relatives of same) if not presently local residents

   b) Present owners of LSIF's (if low in proximity)

   c) Farmers adjacent to LSIF's

   d) Local business owners

3. Secondary data analysis

   a) Local tax records

   b) Farm auction records of former FF owners

   c) Local farm related business data

   d) Real estate records

   e) Census data

   f) Local newspapers

   g) Plat books

E. Major questions to be addressed in the research

1. What differences exist between the former FF's, present LSIF's and control group farms for a number of characteristics?

   a) Conservation practices

   b) Value of machinery, buildings, livestock, production, sales

   c) Man:land ratio

   d) Proportion of gross and net farm income remaining in community

   e) Marketing and purchasing patterns of farm related goods and services

   f) Governmental subsidies received

2. What differences exist in the characteristics of former FF owners and their families, and those presently residing on the same land and the control group?

   a) Membership and participation in community voluntary organizations

   b) Income characteristics, proportion spent locally

   c) Purchasing patterns for personal and family goods and services

   d) Political participation

   e) Religious participation

   f) Levels of residential stability

   g) Education characteristics

   h) Population characteristics (number, age distribution, dependency, ratio, etc.)

3. Information from interviews, questionnaires and secondary data analysis will be used to answer the question, "What changes have taken place in the community since the establishment of LSIF's?"

   a) Number and variety of businesses and volume of business

   b) Tax revenue

   c) Area land values

   d) Number, variety and membership of voluntary organizations

   e) Number, membership, levels of participation in churches

   f) Political participation

   g) Population size and structure

   h) Number, variety and volume of service organizations (doctors, lawyers, dentists, etc.)

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F. Proposed time Schedule

1. Initiation data: October 15, 1972

2. Duration of project: 2 years

3. Time Schedule

a) Community selection, site visits, field work	2 months
b) Development of research instruments	2 months
c) Selection of interviewers, training, construction of sampling lists, identification of secondary data sources	2 months
d) Study of Community I	1 month
e) Interviewing in Communities II - IV Assuming 150-200 interviews at three (3) a day per community	2 months
f) Collection of secondary data	1 month
g) Coding of data, punching of data	2 months
h) Data analysis - preliminary results	6 months
i) Final report	6 months
	24 months

G. Proposed 2 Year Budget

Project director, 2 years @ $ 7,000 per year	$ 14,000
Project Assistant: Full-time: 2 years @ $ 10,000 per year	20,000
Interviewers: 3 for 10 months each @ $ 8,000 per year	20,000
Typist - Full-time: 2 years @ $ 6,000 per year	12,000
Travel, Expenses	5,000
Consultants	2,000
Card Punching	2,000
Computer	4,000
Supplies	1,000
	$ 80,000

These costs are approximations and could eventually be revised either upwards or down. After the four communities have been selected for study and the initial field work completed it will be possible to specify the total costs more accurately. After this stage of the research is completed travel costs will be known and the approximate number of interviews and questionnaires.

Statement Prepared for the

SUBCOMMITTEE ON MONOPOLY OF THE SELECT COMMITTEE ON SMALL BUSINESS

United States Senate

Senator Gaylord Nelson, Chairman

Hearings on

CORPORATE SECRECY: AGRIBUSINESS

By

WALTER GOLDSCHMIDT, Professor of Anthropology

University of California, Los Angeles

Re

RESEARCH INTO THE EFFECTS OF CORPORATE FARMING

ON THE QUALITY OF RURAL COMMUNITY LIFE

Wednesday, March 1, 1972

Room 318, Old Senate Office Building

Washington, D.C.

I am the author of a study entitled, "Small Business and The Community; A Study in Central Valley of California on Effects of Scale of Fram Operations" which was executed in 1944 and published by this Committee on December 23, 1946 and republished by your Committee in 1968. This study documents what happens to the quality of rural life when the land is dominated by large agribusiness as compared with communities in which independent family-sized and family-operated commercial farms, of the kind that have been the bulwark of American democracy, comprise the economic base. Corporate farming has long dominated the California rural scene, though there are also areas in which the land was divided into small family-sized plots and where the traditional form of American agriculture is to be found.

In the quarter century since the publication of that study, corporate farming has spread to other parts of the country, particularly to the American agricultural heartland which has always been the scene of family-sized commercial farmers. This development has, like so many other events of the period, been assumed to be natural, inevitable, and progressive, and little attention has been paid to the costs that have been incurred. I do not mean the costs in money, or in subventions inequitably distributed to large and small farmers. I mean the costs in the traditions of our society and its rural institutions.

It is my purpose here to impress upon your Committee the need to examine both the causes and the effects of the increased encroachment of agribusiness on American rural life, and I believe that you will find that my earlier study can serve as a model for parts of such an examination. It may be that the social effects of large-scale corporate farming that were demonstrated to have taken place in California no longer prevails; it may be that the conditions that obtained then in California do not appear in the Middle West and South of the 1970's, and if this is the case, it is important for us to know. I myself am convinced, however, that the results of the earlier study will be substantiated because I believe that the causative forces are inexorable; that corporate farming creates an urbanized and impoverished rural community. If I am right in this belief, then the information derived from the study of the influence of corporate farming on rural life can serve as a powerful incentive for reformulating American agricultural policy. This will be particularly true if we find that similar effects appear in the American heartland, for it was possible in the 1940's to consider corporate farming to be merely an aberation characteristic of California, like its evangelical sects and its movie star politicians. It is important to know what is happening now, and what is happening outside of California.

In order to impress upon you the importance of undertaking such a study, it will be necessary for me to present some of the details of the events and the character of the conclusions surrounding the earlier work. I will have to be somewhat autobiographical and I trust that I am not yet so old as to be in my anecdotage and can keep this discourse to a minimum.

I am an anthropologist; while still a graduate student I became interested in the possibility of using the techniques and the theories of anthropology for the study of the modern American community. I was supported in my dissertation by a fund made available by M. L. Wilson, then Director of the Extension Service, to the Bureau of Agricultural Economics, U.S.D.A. My study of Wasco, a town in the San Joaquin Valley, was completed in 1941. It served as the dissertation that was required for the Ph.D. degree which I received in 1942 from the University of California, Berkeley, by which time I was on the regular staff of the B A E. This study of Wasco showed that the industrialized farming that characterizes San Joaquin Valley resulted in an urbanized rural life; with appropriate revisions it was published under the title, As You Sow, first by Harcourt and Brace and later by the Free Press of Glencoe, Illinois, which later became a part of Macmillan.

Shortly after the completion of this study, I was seconded to a task force engaged in research on the Central Valley Project under the general direction of Dr. Marion Clawson, funding for which was provided by the Department of Interior. The Central Valley Project Studies consisted of a collaborative effort to provide answers to a number of basic policy questions resulting from the engineering plans then underway. Various agencies of the state and federal governments collaborated on these studies, and the general results were published as reports of the several committees. One of these questions dealt with the problems attendant upon what is generally called the acreage limitation law and the implications for the application of that law

to lands supplied by waters developed under the giant reclamation project in California. This question read, in part, as follows: What effects will this project have on agricultural economy and rural life in the Central Valley . . .?

This question is amenable to direct empirical investigation and it was in partial response to it that the study under discussion was initiated. This study may therefore be considered as background investigation in the service of the committee dealing with this question. The study was formulated on strict scientific principles of controlled comparison. This meant two things: (1) We had to select two towns which were comparable in all basic economic characteristics except for the matter of scale of farm operations, and (2) we had to establish verifiable criteria for the impact of the diverse economic organization upon the community life. We limited our investigation to the San Joaquin Valley, which was the target area for the agricultural development of the Central Valley Project. Fortunately, within this area, there is a general comparability of soil, climate, etc. and there are, at the same time, extreme differences in size of farm operations. On the basis of a number of considerations as to what elements should be held constant, we ultimately selected the town of Arvin, in southeastern Kern County, as representative of the large-scale, corporate farm operations, and Dinuba, in northern Tulare County to represent the family farm situation. In each of the two communities we examined public records, interviewed community leaders, and ordinary citizens, and took a questionnaire from a scientifically constructed random sample of the population. This questionnaire was designed to give us the following information: (1) household composition, occupation, nature of farm enterprise (for farm operators)

and the like; (2) social participation in community affairs, (3) economic status and participation and (4) level of living. In addition to the information that I and my team assembled in the field, we had accurate information provided by others on the following items: (1) the limits of the community as determined by a team of rural sociologists, (2) the size of farms by two measures obtained from the records of the Agricultural Adjustment Agency by economists equipped to analyze such data, (3) the total value of agricultural products from the previous year obtained in the same manner and from the same source, and (4) the value of retail sales by major categories of business enterprise obtained from the state sales tax records.

The difference between the two communities was impressive; they were set forth in my summary of findings and should perhaps be placed in the record here:

(1) The small farm community supported 62 separate business establishments, to but 35 in the large-farm community; a ratio in favor of the small-farm community of nearly 2:1.

(2) The volume of retail trade in the small-farm community during the 12 month period analyzed was $4,383,000 as against only $2,535,000 in the large-farm community. Retail trade in the small-farm community was greater by 61 percent.

(3) The expenditure for household supplies and building equipment was over three times as great in the small-farm community as it was in the large-farm community.

The investigation disclosed other vast differences in the economic and social life of the two communities,

and affords strong support for the belief that small farms provide the basis for a richer community life, and a greater sum of those values for which America stands, than do industrialized farms of the usual type.

It was found that--

(4) The small farm supports in the local community a larger number of people per dollar volume of agricultural production than an area devoted to larger-scale enterprises, a difference in its favor of about 20 percent.

(5) Notwithstanding their greater numbers, people in the small-farm community have a better average standard of living than those living in the community of large-scale farms.

(6) Over one-half of the breadwinners in the small-farm community are independently employed businessmen, persons in white-collar employment, or farmers, in the large-farm community the proportion is less than one-fifth.

(7) Less than one-third of the breadwinners in the small-farm community are agricultural wage laborers (characteristically landless, and with low and insecure income) while the proportion of persons in this position reaches the astonishing figure of nearly two-thirds of all persons gainfully employed in the large-farm community.

(8) Physical facilities for community living--paved streets, sidewalks, garbage disposal, sewage disposal, and other public services--are far greater in the small-farm community; indeed, in the industrial-farm community some of these facilities are entirely wanting.

(9) Schools are more plentiful and offer broader services in the small-farm community, which is provided with four elementary schools and one high school; the large-farm community has but a single elementary school.

(10) The small-farm community is provided with three parks for recreation; the large-farm community has a single playground, loaned by a corporation.

(11) The small-farm town has more than twice the number of organizations for civic improvement and social recreation than its large-farm counterpart.

(12) Provision for public recreation centers, Boy Sout troops, and similar facilities for enriching the lives of the inhabitants is proportioned in the two communities in the same general way, favoring the small-farm community.

(13) The small-farm community supports two newspapers, each with many times the news space carried in the single paper of the industrialized-farm community.

(14) Churches bear the ratio of 2 : 1 between the communities, with the greater number of churches and churchgoers in the small-farm community.

(15) Facilities for making decisions on community welfare through local popular elections are available to people

in the small-farm community; in the large-garm community such decisions are in the hands of officials of the county.

The body of the report presents in detail the statistical information regarding these differentials just summarized.

The body of the text had also to perform another task. While the study was built on the principle of controlled comparison and every effort was made to avoid the existence of other independent differentiating factors that might account for these variances, the real world does not provide a perfect natural laboratory and it was necessary to examine other potential factors. It was, for instance, very important to discover that the economic base of the two communities was virtually identical (there was about 4% difference in gross farm income). The impoverished appearance and the impoverished condition of the Arvin residents could not, therefore, be attributed to relative economic poverty as measured by the objective criteria available to us. This recognition of the economic base is a very significant finding, for if you had visited Arvin and Dinuba at the time, you would certainly have thought that Arvin was in a virtual economic Appalachia rather than a town in the richest fertile valley of our country. I want also to emphasize another point here; namely, that this economic information was developed by economists, not by me. It was therefore not affected by any bias, conscious or unconscious that I might have had, and which I was accused of having been guilty of.

We had also to examine the implications of the fact that Arvin was a much younger town than Dinuba and that it might be argued that

the facilities that characterized Dinuba had simply not yet been developed in the younger town. Fortunately, we were able to develop data on the history and growth of population, using such reasonable measures as the daily average attendance in schools. We found that when we shifted the time date twenty years, the growth patterns of the two towns followed a closely parallel curve. We thus could show that many of the facilities which had appeared in Dinuba quite early on that growth curve did not appear in Arvin until much later and in many instances had not, at the time, appeared there at all (this information is set forth on figure 20, page 99). We also could make comparisons between Arvin and other towns (including Wasco, the subject of my earlier study) to show similar differentials and to demonstrate that the differential between the two communities could not simply be attributed to the age of the two towns. I find it remarkable that after the study was published, its critics kept reiterating this hypothesis that Arvin was merely a younger town, completely overlooking the fact that I had effectively made this a meaningless argument by the data in the report. Thus, for instance, the late Senator Sheridan Downey, in a privately published polemical book dealing with the Central Valley Project, called <u>They Would Rule The Valley</u>, bases his critique largely on this assumption.

I should say that we were never satisfied with the idea of making a comparison of two towns only, but had from the outset planned a second-phase of the study. We were prevented from doing this. The story of why we were so prevented is perhaps more revealing of the problems derived from large-scale operations than would have been the research itself, and I must therefore review these events

briefly. But first I will describe what the second-phase of our study was to have been like.

Using the differentials between Arvin and Dinuba, we intended to develop something like an index of community quality. This index (or the several items analyzed separately) would be based upon the salient differences found between Arvin and Dinuba, but consisting of items that could readily be obtained either from published sources, by direct inquiry, or by direct observation. We had in mind such things as: The number of churches, civic organizations and extra-curricular school clubs such as Boy Scouts; acreage in public parks; number and kind of retail outlets locally available; the existence of such institutions of democratic concern as a town council; the existence of such important local enterprises as newspapers and banks; the number of teachers residing in the community and their average length of tenure. In short, this index would have consisted of those elements that are the external expressions of the qualities of good rural community. Once we formulated such an index, it would be possible to plot the values obtained against the farm size of each of the 25 communities in the San Joaquin Valley, as listed on Table 1 of the study. Thus we might have created a scale representing the summation of these elements so that a high score placed a town at the Dinuba end and a low score at the Arvin end, and shown that this diversity correlated negatively with size of farm. Or, we might have discovered a kind of cut-off point--when farm size exceeds a certain level, all or most of these items disappear from the local scene. We don't know because, as I have said, I was not allowed to engage in this phase of the work. But you can

readily see that this would have been a powerful tool for the study of the relationships that I, as a public servant, had been asked to examine. It would, incidentally, have had another effect; de-emphasis of attention to the two towns as such. (I have always felt that it was a matter of some unfairness that so much emphasis was placed upon the town as an individual social entity; I certainly had neither the desire nor the intent to cast aspersions upon the citizenry of a community.)

I was ordered by my Bureau chief in Washington not to undertake the second-phase of the study. He did so in response to a build-up of pressure from politically powerful circles. These same sources of influence would have, as a matter of fact, prevented the publication of the report itself, had it not been for the existence of this important Committee and the actions of the late Senator Murray of Montana. I was told, Mr. Senator and gentlemen, that the official manuscript of the study was literally in the file drawer of the desk occupied by Clinton Anderson, then the Secretary of Agriculture, and that it was released to Senator Murray only upon his agreement that there would be no mention anywhere in the published report of the Department of Agriculture. It was in response to this directive that I forewent those appropriate and traditional acknowledgements to the many colleagues and coworkers who had made this study possible and successful. (I hope that some of these may read this testimony and accept this belated explanation for my apparent oversight, along with my apologies.)

I could regale this Committee beyond its endurance with stories about this public pressure--as for instance our small research team

(myself and two enumerators, one of whom was my wife) listening to ourselves being vilified on the radio each noon, as we ate our lunch in Dinuba's pleasant little park, by the newscaster sponsored by the Associated Farmers of California. This regular entertainment was brought to a close only after I took advantage of an equal time provision and answered his charges on radio time paid for by the Associated Farmers themselves. The columnist, Sokolsky, devoted a column to us at least once, the commentator Fulton Lewis, Jr., devoted a half-hour broadcast to us, while the urban presses of San Francisco and Los Angeles (hardly disinterested parties to the issue themselves) made repeated attacks and the conservative agriculture press carried on a constant barrage of complaint about what they called our "dirty rug questionnaire." This was the visible part of the pressure.

You do not have to take my word for this. Twenty years after the study was made, Richard S. Kirkendall, an agricultural historian, gave the incident a full, heavily footnoted treatment, which sets forth rather fully the efforts to discredit the work--though I must say I find the article over-researched and the problems involved under-comprehended. Kirkendall's article should be placed in the record, and I submit it for inclusion in the published Hearings. It is entitled, "Social Science in The Central Valley of California; an Episode" and published in The California Historical Society Quarterly in 1964.

While Kirkendall has shown some of the lengths to which the opponents of the acreage limitation law went in their efforts to discredit the study, he does not tell the full story, despite his

excessive use of references. He takes no note of the fact that I was not permitted to carry out the second phase of the study, though there must certainly have been something in the record on that too. He notes that I do not reference the Department of Agriculture, or any of my collaborators in the study, but he is unaware as to why. Here, perhaps, there was no written evidence. Actually, Kirkendall does not seem fully aware of the issues, for he writes as if he thinks of the Dinuba farms as marginal operations, which was by no means the case. But my most important criticism is that, by trying to remain above the issues and deal with the matter in an unpartisan way, and chiding me for my "eagerness" and "passion," to use his words, in presenting the case, he does not seem to appreciate the moral issues of censorship itself--and censorship it was. He quotes some of the BAE personnel in saying that I had disregarded contrary evidence, but he does not say what contrary evidence--for the fact of the matter is that none was ever brought forward. He also reiterates the argument that Arvin was a younger community and does not acknowledge that the report shows that this argument simply does not hold. There was passion in my response to the actions to suppress the Arvin-Dinuba findings, but this was not the passion to propagandize as he implies, but rather it was the passionate belief in the right to make the investigation and the right to report its results. It was a sentiment that led me to believe--perhaps idealistically--that if the BAE could not execute and publish such research, than its demise would be no tragedy. It was this sentiment which was largely responsible for my leaving governmental research for University teaching, at no small financial sacrifice.

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I might add that, as a scholar from another discipline, I am bemused by the fact that Kirkendall was so involved with the tradition of his craft of historian, that he purposely limited himself to the written documentation, making no efforts to contact me or those colleagues who might have helped him to avoid his many misconceptions. In my mind I have written a response to him with some such title as, "Social Science in The Central Valley; Response from one Prematurely Interred in His Grave."

Though Kirkendall misinterprets me and misrepresents my actions, he does document the fact that the BAE vascilated and temporized in the handling of the affair. As you know, the agency suffered a massive curtailment of its activities at the hands of Congress and ultimately has eliminated its sociologically-oriented research programs entirely.

There was one effort made to answer the Arvin-Dinuba study. This is a report entitled, "The Arvin Area of Kern County; an Economic Survey of the Southeastern San Joaquin Valley in Relation to Land Use and the Size and Distribution of Income." The study by two economists, Cecil L. Dunn and Philip Neff, was according to the mimeographed copy in my files, "Prepared for the Board of Supervisors of Kern County and the Water Resources Committee of the Kern County Chamber of Commerce." The report fails to face any of the issues really raised by the Arvin-Dinuba study, but rather discusses in detail the nature of economic expenditures in Arvin as compared with other areas of Kern County.

From the standpoint of the Kern County Chamber of Commerce, apparently, the aspect of my research which really hurt was the

evidence of curtailed retail trade and the consequent diminution of commerical opportunities--not the absence of social amenities or democratic institutions. Thus the Neff-Dunn study tried to show that trade was as great, but took place in Bakersfield and other urban centers. Thus efforts to suppress, to refute, to discredit and to defame the study (and occasionally myself and some of my associates) came to nought. Nobody pointed to inaccuracies in the data, to failures of analysis, or to the evidence that I was said to disregard. The study has entered into the documentation on rural life as well as with the discourse on farm policy. It was made the subject of a Public Affairs Pamphlet by Carey McWilliams and was extensively used in the posthumous book of the late Senator Estes Kefauver.

As a scholar and scientist, I take particular pride in the fact that it was not only favorably reviewed in the academic journals, but was extensively quoted in several of the leading textbooks that came out shortly afterwards, including: (1) Jessie Bernard, American Community Behavior. Dryden, New York, 1949, pp. 28-9 (2) Lowry Nelson, Rural Sociology, American Book Co., 1948, pp. 220-21, 274-276. Second edition, pp. 274-276. (3) Charles P. Loomis and J. Allan Beegle, Rural Social System, 1950, pp. 301-3.

Clearly the efforts to suppress, discredit, and answer the study were inspired and fostered by those who did not want these data known. I believe that similar efforts will be made in respect to any endeavor to replicate the study, in California or elsewhere. It is for this reason that it is of the greatest importance, not only that the study be updated, expanded, and brought to bear on areas such

as your own State of Wisconsin and elsewhere in the farming heartland, but that it be done with the sponsorship and support of this vital Committee of the United States Senate.

I have stressed the fact that in the prosecution of the research we were guided by the best principles of scientific investigation. This meant, first, that we utilized what has subsequently come to be called "controlled comparison," bringing into field studies the closest practicable equivalent to laboratory procedures. It meant also that we were guided by principles of objectivity in all matters. Such objectivity was expressed in our careful sample selection, in our statistical procedures and perhaps most dramatically in the source of much of our data, which was independantly supplied by other investigators. There are two other elements in this research that must be given due emphasis.

The first of these is that the differences we found between the two communities relate back to basic theoretical considerations in the science of sociology; particularly as formulated in theories of urbanization. I do not want to carry you too deep into these theoretical waters, but let me point up the fact that urban social systems are characterized by heterogeneity rather than homogeneity, by differentials of status and power, by depersonalization of social interactions and by social isolation and alienation. In my Wasco study, as I have already pointed out, I showed that the industrialization of farming had the effect of urbanizing this rural community--hence its title, As You Sow. Of course industrialization is not simply all-or-none, and the Arvin-Dinuba comparison carried this analysis further, for it showed that as corporate operations

increased, these urbanizing effects are exacerbated, while with lessened industrialization of production, such influences are ameliorated. There is nothing mysterious or esoteric about this relationship. The crucial factor is that with increased industrialization the population consists of dependent wage labor rather than economically independent entrepreneurs. These workers are not merely impoverished and dependent, they lack the essential power to formulate communities of the kind we know in our farming areas. Increase the corporate-operated farming and you increase the proportion of such laborers. I think that it is important to recognize that this research relates to basic sociological theory.

My second point has to do with the matter of values. There is great confusion about the relationship between science and values. It is generally recognized that the reality of values is not amenable to scientific proof. This is clearly the case, for values are sentiments we hold and share. It is also said that science is value-free, by which it is properly meant that the scientist must set aside his own values in examining the reality of cause and effect. But these two points have led some to assert that science cannot deal with values at all. This is manifestly false, for values regularly enter into scientific study. For example, the President's current all-out effort to analyze the causes of cancer operates on the assumption that cancer is bad and that therefore a cure for cancer is good. These are values that all of us accept. Again, when an economist analyzes the profitability of an enterprise, he takes for granted that it is good to make a profit. Nothing the scientist does validates the assumption that cancer is bad and profits are good;

what the scientist does is to determine the causes and conditions under which good or evil will prevail.

The same approach characterizes the Arvin-Dinuba study. It did not prove that democratic egalitarian communities with high levels of social participation and stability of population are good. This is a value that we share; it is a matter of commitment or faith, if you wish. What my research did was to assume the values to be real and to demonstrate the conditions in which they flourish or languish. Most social scientists have shied away from anything involved with values. They apparently fear that to do otherwise would breach the canons of science, which must remain value-neutral. It is a confusion I deplore, and it is one that has led, I think, to the dullness and irrelevance of much of sociological research. They forget that most science takes basic values for granted. In the Arvin-Dinuba study we were examining the conditions that support or destroy these traditional values. It was then merely a matter of asking the right questions and following the basic tenets of scientific study to test this basic question against the realities as they existed.

This matter of asking the right questions makes me want to digress a moment and consider a related problem; namely, the moot question of the so-called economies of scale. One of the problems of the Central Valley Project Study concerned the economic effects of farm size and Dr. J. Karl Lee, then a colleague of mine, analyzed the problem in the Central Valley. That study is not so definitive as I would have liked, but it does tell us something about the economies of scale, and what it tells us is most important. The advantages by no means lie so clearly with the large enterprise. It is important to ask the right questions. Let me explain.

To economize means to maximize returns from a limited set of resources. Because the economist is habituated to think in terms of money, he translates this statement to mean the obtaining of the greatest dollar return for the dollar invested. But there are other things to economize than money; there are other investments. I do not mean simply that large-scale operations are often advantaged by such matters as rebates or discounts on purchases, or by tax advantages, or by the knowledge and ability to take advantage of certain governmental largesse--though these are certainly factors in the profitability of large farms. I mean that we must ask the question as to whether the returns of food and other farm products per unit of land is maximized in large farms or on family farms; whether the energy of input is maximized; whether the returns of agricultural products per input of labor is greater in one than the other. In other words, are we economizing use of land; are we economizing the use of labor; are we economizing the use of nonhuman energy input? It is in this context that I want to quote from the conclusions of the report by Dr. Lee:

> The large and medium-large farms have a slight advantage over the medium-size farms in output per unit of capital employed. But judging from past performance the medium-size summer-field-crop and dairy farms and the medium-large fruit farms have the advantage over other size groups studies in maximizing work opportunity, agricultural production, and the potential trade, or in maximizing income for the maximum number of people directly dependent upon agriculture for their livelihood.

The problem of the economies of scale is an important issue. I think you will find there are real and important questions with respect to them that deserve your attention. Certainly there are those who will say, should you follow a program of supporting a study on the social effects of corporation farming that "yes, all of this is true, but we must learn to live with the inevitable." I think that the large-scale farming is more profitable, in the purely dollars and cents meaning of that term, than is the family-sized farm, for I do not believe that the growth of agribusiness would have taken place if this were not the case. But I believe that this is a profitableness that derives from extraneous factors and is not a product of more efficient use of land, labor, or energy resources. And these, I believe you will agree, are the resources that increasingly we need to economize on.

Let me return to the social consequences of the incursion of agribusiness into the rural landscape by reiterating the hope that you will find the means to reexamine this problem along the lines of my earlier study. As your Committee is fully aware, the number of family-sized farms is rapidly dwindling throughout the United States and this change is taking place as a result of the incursion of large-scale corporations into the business of producing food and fiber. I am convinced that this development has been largely a product of policies of the United States Government--particularly policies with respect to agricultural support and with respect to farm labor. Even if it is a product of "natural" causes, this does not mean either that it is inevitable or that it is progressive. If, as my earlier investigation indicated for California, it is

deleterious to community life, then certainly we should know this fact and undertake the formulation of policies which will stop the trend that has been taking place. It is important to determine whether, in fact, these deleterious effects are recurrent.

While I think that my study can serve as a model for such investigations, I am not suggesting a mere replication of it. There are certainly differences in a situation where a community developed from the outset in corporate farm operations (as was the case in Arvin) from one which was slowly transformed from small-farm productivity to agribusiness domination (as is the case in our Mid-West heartland). Such differences will have to be taken into account in undertaking a re-study.

I am sure there are other local factors that have to be taken into account, but those who have worked in the Middlewest and South are in a better position than I to determine this. There also have been improvements in the technology of research, and I am certain that the modern sociologist would be able to devise a better questionnaire than the one I formulated in 1944. But these are details; the basic idea of making a comparison of two towns within the context of similar economic and productive processes, differing only in the scale of operation is a sound method. The second-phase, which I so regrettably was unable to prosecute, is also one that should most emphatically be pursued.

I do not think the cost of such a study would be very great. In terms of that measure of research costs that I often use, the cost of a moon shot, it would be very small; I would say it would cost no more than a tenth and perhaps as little as a hundredth of one moon shot.

It will want the collaboration of economists and sociologists for some of the data must be obtained by specialists in each field. I will be happy to discuss further any details of the research program as we prosecuted it in California and am prepared to be of such help to the study group as amy be desired, within the limits imposed by the commitments and obligations that I must honor.

I am certain of one thing, that the prosecution of such research will be benefitted not only by fiscal support from this Committee, but by the moral and, should I say, political support this Committee can give, and I think that such research, carried out with the rigor of scientific investigation and the canons of scholarly work, will serve as a powerful tool to help us "to cultivate," if I may borrow your words, Senator Nelson, "not just food and fiber but a good culture and a happpy, healthy populace."

STATEMENT

by

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Before Subcommittee on Monopoly
Senate Small Business Committee

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My comments will be directed toward the problem of the relationship between large-scale and corporate firms in agriculture and the rural community including the persons employed in agriculture. These comments are based largely upon a study of corporations engaged in agriculture in Wisconsin in 1968.

In order to place my remarks in perspective, I should first like to discuss some of the considerations relating to the general problem of large-scale corporate farming and the rural community. By the rural community, I include the people who make their living working in agriculture as managers or as workers, those who buy from and sell to these persons and those who provide the services required of the people connected with agricultural production, processing and marketing. The rural community consists of all those people and firms connected with agricultural products before they reach the urban market.

It is important to maintain a level of living and quality of life for the people in rural areas consistent with that for the nation as a whole and consistent with the contribution made to the society by the people in rural [redacted] areas. It is because the rural areas of this nation have great difficulty in maintaining their standards of living and of services in the face of a declining farm population that we have reason for special concern. The corporate enterprise which enters a rural area replacing smaller owner-operators with hired managers and workers who buy and sell outside of the community adds to an already serious problem in many communities.

Some of these problems pertain to the temporary adjustment of the persons displaced as farms are sold. But, the more serious problem is in part an ecological one and that is how to provide adequate services to fewer people in rural areas without increasing greatly the time and cost of providing them. Improved roads and communications have increased the distance to which rural people can go for trading and for services. Consolidated schools and buses have put rural children into larger schools. But, when the number of people who buy and sell and who use local services decreases because some carry on their transactions outside the locality [redacted], it places a double burden upon those who remain. In effect, fewer people must maintain the services of the community with the cream of the business and support going elsewhere.

The influence of the absentee owner was pointed out by Professor Goldschmidt in his study of Arvin and Dinuba. About two-thirds of the land

owners in Arvin, the large-scale farm [redacted] community, lived outside the community while this was true for less than one-third of the land owners in Dinuba, the family-farm community (Goldschmidt, 1946). This is one of the most distinctive differences between the two communities. This tends to create a kind of "vicious cycle." The more wealthy who live outside and who do their business outside a community, the poorer the services become; and, the poorer the services become, the fewer the people who want to live in the community if they can live or do their business elsewhere [redacted] So, the effect of the shift of resources outside a community tends to set forces in process which are accentuated over time unless there are counter forces operating.

This is part of a more general problem of how to prevent centers of population and wealth from exploiting the periphery (Weintraub, 1971). This tends to occur in the exchange between rural and urban areas but has been offset in part by various programs for the benefit of farm and rural people. But, as often happens, some programs designed to benefit the average farmer turns out to benefit those who already have the most land or other resources (Tweeten and Schreiner, 1970). More study is needed of the extent and nature of exchange between rural and urban areas and how inequities can be alleviated. This includes the transfer of wealth from rural to urban residents through inheritance, the exchange of goods and the migration of people between rural and urban areas and the education, skills and wealth which they take with them. Information is needed on the factors affecting the availability and the costs of services in rural areas for the purpose of developing policy which will prevent

further inequities [redacted] affected by the exodus of people and the transfer of wealth and business dealings to larger centers.

I have deviated somewhat from the topic of the impact of large-scale corporate farming but it appears to me that we must place the problem in the perspective of what is happening to the relationship between the centers of power and wealth and the wider geographical areas upon which they depend. This is a problem within urban areas and within rural areas as well as between rural and urban areas.

Now, I should like to return to some of the findings of our study of corporate farming in Wisconsin from which will be elaborated in more detail by Professor Rodefeld. Our purpose was to study the characteristics of incorporated farms and of the resident owners, hired managers and hired workers on these farms. While we did not include in the study non-incorporated farms, we did make comparisons with data from a cross-section of farms in Wisconsin interviewed for other purposes. The findings from our study are contained in two reports--one on the characteristics of the farms by Professor Rodefeld (1971) and one on the characteristics of the persons managing and working on a sample of these farms by myself and Professor Rodefeld (Wilkening and Rodefeld, 1971).

In our study we identified 568 corporations which were engaged in the production of agricultural products in 1968; eliminating 39 sod farms, nurseries, Christmas tree farms, etc., left 529 which produced food or fibre. From this group we drew a sample of 110 farms on which we interviewed the principal manager in charge of the day-to-day operations and from one to three full-time workers making a total of 70 workers interviewed.

For purposes of reporting the results, we classified the farms into three groups: (1) those on which the owner or owners lived on the farm and managed the day-to-day operations and together with their families performed most of the work on the farm (owner-operator farms); (2) those on which the owner or owners lived on the farm and managed the day-to-day operations but hired most of the labor (owner-manager farms); and (3) those on which the owner did not live on the farm and hired managers in charge of the day-to-day operations (hired-manager farms). The first type, the family farm, is little different except larger in size than the average non-incorporated family farm. Of those interviewed, 34.6% were owner-operator farms, 40.9% owner-manager farms and 24.5% of the hired-manager type.

Because of the relatively few large-scale incorporated farms and their scattered distribution over the state, it was not possible to determine directly their impact upon rural communities. Such studies can be made more effectively in those regions of the country where a high proportion of the land and the farms are of that type. With some exceptions the dairy-farming areas of the Upper Midwest have not attracted many large-scale corporations to date. [redacted]. The dairy herd, requiring daily care and labor is still primarily a family operation. Only in Central Wisconsin are the combinations of land values, productivity, topography and other conditions such that a high proportion of the farms might become of the large-scale type.

The point is that we are dealing with a phenomena, the effects of which are difficult to observe and to measure. This is in contrast to certain areas of the West in which the patterns of large-scale corporate farms are more pervasive. It is for this reason that the focus of our study was upon the individuals and the families involved in corporate farms rather than upon the communities. However, the results from our study should have implications for communities. To the extent that income, levels of living, work patterns, satisfaction with work, buying and selling habits and social participation differ for the different types of farms and for the hired workers as opposed to the owners and managers inferences can be drawn for the communities in which the farms are located.

I will report on a few of the findings of our study pertaining to the characteristics of the individuals and families on the 110 farms included in the study. Remember that our study included only 25 farms with absentee owners and hired managers and workers. We were not able to obtain interviews with the managers and workers on at least two large-scale corporations involved in potato and vegetable crop production. I suspect that this refusal to cooperate is an indication of the desire to withhold information which they feel should not be made public despite our promise to maintain confidentiality of information on specific individuals and firms. Both corporations had headquarters outside the State of Wisconsin. I must add that both of these did complete a brief questionnaire sent to the principal officer of the corporation although some others did not.

According to our survey, the persons who managed and did most of the labor on their farms were not greatly different in their personal, social

economic characteristics as compared with the average farmer in the State, although their farms and incomes were larger. However, those who owned and managed but did less than half the physical work on the farm were better educated, more of both husbands and wives had been reared in towns or urban centers and more lived in town or very close to town than of the owner-operators.

The family becomes less involved in farm work and decisions the larger the farm. Three times as many of the wives of the owner-operators helped with farm chores than of the wives of owner-managers and twice as many (half as compared with one-fourth) of the owner-operators assisted in keeping farm records. Wife's involvement in farm decisions and involvement of children in farm chores also decline with size of farm. The wives and children of hired managers tend to be involved in farm work and decisions less than on the owner-operated but more than on the owner-managed farms. For the most part it appears that the hired managers are persons who have lived in the communities a considerable length of time and their families were interested in and involved in the farm enterprise more than the families of the owner-managers but less than the families of owner-operators.

Satisfaction with work should be some indication of the opportunities and the rewards which the different types of farms provide for those who live and work on them. It should be kept in mind that we did not interview the owners who lived off the farm and did not manage the day-to-day operations.

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Two measures of work satisfaction were employed. One pertained to the extrinsic aspects of the job--satisfaction with income, opportunity for making more income and perceived status of the job; while the other pertained to the intrinsic aspects of the job--how well they liked the work, felt their work was something they could do best and the extent to which they were their own boss. Surprisingly, there was little difference among the owner-operators, owner-managers and hired managers with respect to work satisfaction. Actually, owner-managers were slightly lower in extrinsic satisfaction than either of the other two groups despite the fact that they owned more land and had larger incomes.

The greatest difference in work satisfaction occurs between the owner and manager groups and the hired workers, although again the differences are not as great as expected. Furthermore, hired workers on farms managed by hired managers had slightly higher satisfaction as determined by both indexes, than the hired workers on farms managed by resident owners.

Responses to two additional questions were also revealing. Hired managers felt that they had "done the best with their life" with 44 percent responding "yes, entirely so;" owner-managers were next with 33 percent; and owner-operators and workers on hired-manager farms next with 29 percent and 28 percent, respectively, responding in this manner. Only 20 percent of the workers on owner-managed farms felt they had "done the best with their life" indicating that hired workers on farms managed by resident owners feel themselves at a greater disadvantage than other groups.

In response to how satisfied they were with their lives, about half of the owner-operators and hired managers were "very satisfied" (54 and 46

percent) while workers on the farms managed by resident owners were least satisfied with their lives (23 percent were "very satisfied"). Owner-managers and workers on farms managed by hired managers fall in between with 36 and 40 percent, respectively, being "very satisfied."

These [redacted] suggest that income and wealth do not necessarily bring satisfaction. It may be that those who have both power and wealth are in part victims of social and economic forces which have put them in the positions in which they find themselves. The larger farms have more indebtedness and are subject to as many stresses as the smaller farms. As some have indicated, once you get into the business of expanding your farm to take advantage of improved technology and to pay off the indebtedness on the farm, it is difficult to know when to stop. An increase in capitalization places a greater burden upon the manager to make an adequate return above labor costs. The family farmer may be limited in management, knowledge and skills without assistance from public agencies or advisory services.

It is my feeling, on the basis of talking with some farmers and hired managers and workers, that [redacted] are more satisfied with less management responsibility and with the assurance of a steady wage income than as an owner-operator. This suggests that if hired managers and workers on absentee-owned farms, including those of large corporations, are paid adequate wages and have adequate housing and services provided by the communities in which they live, they may be more satisfied than the owner-operators who do not have the skills or other resources to manage successfully under present conditions.

As conditions affecting agriculture change, including changing consumer demands, fluctuating world markets, erosion and pollution problems and more serious insect and disease damage, the small farmer finds it more difficult to meet the challenge and still provide adequately for his family. But, neither is the shift to large-scale corporations an appropriate solution to these conditions. Too often the motives for nonfarm individuals and corporations to go into agriculture are not for the best interests of agriculture and for those depending upon it. They are concerned primarily with increasing their own power and profits and not with the maintenance of the natural and human resources. This occurs in a society and economy in which decisions tend to be based upon the advantages for the individual and for the firm rather than for the community and for the society.

My point is that we need to create policies, and laws to enforce them, which protect the interests of families and communities from the social and economic forces which tend to make human welfare secondary to economic power and profits. We need to assure the people who live on the land of adequate educational and other community services, and the future generations of adequate land and water resources.

How these goals can be attained for rural as well as for urban families will require extensive research. Goldschmidt's study in California has provided a landmark, with few studies in the intervening quarter century to add to it. Sociologists and economists have not faced the complex theoretical methodological and value issues involved in doing this kind of study. But, we now have the technology and some theoretical and methodological tools for approaching these problems. Recent efforts of a North Central Regional

task force committee under the Chairmanship of Professor Willard F. Mueller of the University of Wisconsin Agricultural Economics Department is proposing a study of the organization and control of U.S. food production and distribution system. The creation of the Center for Rural Development at Iowa State University should provide another facility for engaging in this type of research. The problem needs to be approached on a nationwide basis which in the past has been restricted partly by the structure of the control of research through the Separate Land Grant Colleges.

Research relating to the consequences of large-scale corporate firms in agriculture is needed at three different levels: at the level of the farm to include the individuals and families involved in it, at the community and regional level, and at the societal level.

Further research is needed on the human relationships within farms of different sizes and types to determine how the needs and interests of individuals in different roles are affected. This should include studies of owner-manager and manager-worker relationships and the relationship among workers of different types. Efforts along this line include the study of human relations on Michigan fruit and vegetable farms (Voland, 1968), and the study of economic and social aspects of labor in the citrus, lettuce and cotton industry in Arizona (Padfield and Martin, 1965). Special attention needs to be given the migrant workers and how they are affected by the practices of agricultural employers. Studies are needed of how work patterns, relationships with management and compensation procedures affect worker's efficiency, stability and satisfaction. For example, the provision of shares in the corporation to workers as provided by one

Wisconsin agribusiness firm is one type of worker compensation. The role of labor organizations upon production and efficiency as well as upon the security and status of the worker is another area about which there is little current knowledge, and it is likely to be an area of increasing future concern on the part of both producers and workers.

Further research on the effect of the sizes and types of farm organization upon the status, security and satisfaction of owners and managers and their families is needed. There is some evidence in our Wisconsin study that hired managers on incorporated farms are about as satisfied as the resident owners with their financial returns and their work roles. Furthermore, almost as many of the owner-managers as of the hired workers on these farms were least satisfied with the financial aspect of their job. We need to know the extent to which the satisfaction of persons at different levels in the agricultural enterprise is affected by the nature of the internal organization of the enterprise as well as by the size and external aspects of the firm.

Studies at the community level are needed to consider the affect of large-scale agriculture upon the services provided for families at all levels. This may need to include larger areas than the small rural community as studied by Professor Goldschmidt. Rural people today travel much further for all services. It is important to know what is happening to the businesses and institutions in the total area affected by changes in agriculture. There are two aspects of this problem. First, what is happening to the businesses and institutions themselves and secondly, what is happening to the level of services available to different social and

economic classes. That there is a decline in the businesses and services in the small centers is almost inevitable. While [redacted] consolidation [redacted] into larger units may be more efficient from the standpoint of the instutions, the quality of the service may decline (see Day, 1968). Nevertheless, attention needs to be given to the adjustment and relocation of individuals and families affected by the consolidation of services and institutions.

An increase in the social and economic differentiation of people connected with agriculture and the shift to businesses and institutions in larger centers on the part of the higher income group is likely to have a double barrelled effect upon the level of services for the lower income groups. It reduces the number of people supporting the local community and it increases the distinctions among those remaining. To what extent the shift of business and other contacts to larger centers on the part of the higher income group reduces the services for the lower income groups should be determined. Current studies such as those by Professor Glenn Fuguitt (1971) on the growth and decline of population centers in non-metropolitan areas needs to be supplemented with some systematic study of specific regions and communities in relationship to the structure of agricultural enterprises in them.

The studies of regions might be combined with the study of specific communities within them to determine how and why changes in agriculture are affecting changes in the institutions and services. At this point further work is needed on the conceptualization as well as upon the measurement of the relevant dimensions of the communities and regions.

While the data on buying and selling habits and on social participation is essential, this does not tell us much about the stability and adaptability of the institutions and of the total community over a period of time. [redacted] Unless communities isolate themselves from the larger society they need to provide for innovations and changes in the structure and types of activities.

Changes do not always mean growth. The American obsession with growth must be attenuated. The communities of the future which are the most viable and provide the highest quality of services may not be those which are growing most rapidly. It may be those which are able to adapt their resources to the basic needs of a certain number of people and develop linkage with other communities to provide other services. The question is not whether each small community is going to survive, but whether the society and the people in it will survive in a way that will provide the optimum of goods and services to all groups within that society.

Beyond the study of the effect of large corporate systems upon the people in agriculture and in rural communities, current information is needed on such enterprises. While the States authorize the forming of corporations, there is usually little information required by the States on these corporations. Since the size and the nature of the corporations involved in agricultural production has more immediate affect upon other people than is true for the average industrial corporation, it is especially in the public interest to have information about farm corporations made available to the public. This should include current information on land holdings and type of business or businesses of all corporations in the State by county or counties in which the land is located.

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Needed Research Into the Effects of Large Scale Farm and Business Firms on Rural America

Statement by
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Senate Small Business
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Washington, D.C.
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Large firms and the centralization of economic power have long been a source of concern in the American economy, but only recently has this been the case in agriculture. Apart from some flurries of excitement in the land-boom and bonanza-farm days of early settlement, there were no real threats from monopoly power in agriculture until after the second World War. The Trust-Busting era largely by-passed American agriculture.

For the past half-century, structural policies for agriculture have been dominated by technical considerations. The major advice to farmers has been to expand the size of their farms. The criterion of success has been the achievement of lowest unit cost in a micro-economic sense. In measuring this achievement, many economic and social costs that are external to the farm firm have been left out of account.

With the development of truly large-scale firms in agriculture and related businesses, it is increasingly clear that questions of farm size and structure must be answered in terms of their effect on the entire economic and social system, and particularly on the rural community. Calculations of costs and returns within the framework of the agri-business sector will not provide an adequate basis for comparison of the merits or deficiencies of firms of different size or organization.

This statement attempts to set forth some of the key questions raised by the appearance of firms large enough to pose a threat of monopoly power in rural America. Answers to these questions will require

data that are often deficient, or lacking. Suggestions will be made as to research that is needed to provide these data, and to equip private citizens and their political leaders with the information needed for wise policy formulation.

An economic rationale for the large firm in agriculture lies in the fact that it can internalize benefits from large scale that fall outside the control of small firms. The use of large-scale equipment is the example most frequently cited. Other examples include bulk purchasing of supplies and equipment at discounts. These result from the fact that the large firm has greater bargaining power and can bypass conventional units in the retail distribution chain. Incorporation, better accounting, and superior business management practices can improve access to capital markets. Large-volume production permits exercise of market power in the sale of products. The ability of large firms to internalize these scale benefits is the principal reason why farm management advice throughout the past 50 years has focused on increasing farm size as a solution to problems of low rates of profit and inadequate family income.

Only in the past decade has serious attention been give to the fact that the large agricultural firm is also able to achieve benefits by externalizing certain costs. The disadvantages of large scale operation fall largely outside the decision-making framework of the large farm firm. Problems of waste disposal, pollution control, added burdens on public services, deterioration of rural social structures, impairment of the tax base, and the political consequences of a concentration of economic power have typically not been considered as costs of large scale, by the firm. They are unquestionably costs to the larger community.

In theory, large-scale operation should enable the firm to bring a wide range of both benefits and costs within its internal decision-making framework. In practice, the economic and political power that accompanies large size provides a constant temptation to the large firm to take the benefits and pass on the costs.

The rural community receives the immediate impact of this ability of large farm firms to practice selective internalization of benefits and externalization of costs. One of the most pervasive consequences is that the occupational composition of the population changes. Instead of a large number of small entrepreneurs, combining the functions of manager and laborer, the occupational structure includes a small number of managers

and a large number of workers. In rural communities dominated by very large firms, the settlement and housing patterns reflect this increasingly transient nature of the labor force. The symbol of the large corporate farm becomes the trailer house. Community institutions suffer from lack of leadership, and from the lack of a sense of commitment on the part of the labor force to long-run community welfare. Those institutions that survive take on a dependent character, reflecting the paternalistic role of the dominant firms. Income levels may stabilize, but at the expense of a decline in local capacity for risk-taking, decision-making, and investment of family labor in farms and local businesses.

In many cases the rural community declines. Per capita costs of public services go up or the quality of service deteriorates, or both, and the youth of the community are forced to go elsewhere if they are to obtain adequate training, and employment. Poor schools, poor roads, deficient housing and limited cultural opportunities tend to be associated with rural communities dominated by large firms. Examples can be found in California, Colorado, Florida, Texas, the Mississippi Delta States, and elsewhere.

A size of community that can support service staffs for farm supplies and equipment has long been recognized as important to a healthy rural structure. But staffs needed to service the household have expanded greatly in recent years. A shortage in these skills may be more critical than a shortage in fertilizer or feed supply, or in farm equipment repair and maintenance capacities, in determining the future viability of rural communities. Electricians, plumbers, TV repair shops, service centers for kitchen equipment-these are among the key service functions of communities that aspire to a service-center role in the future.

It is noteworthy that a deficiency in the supply of skilled tradesmen of this type is often one of the most pronounced features of "company towns" or communities dominated by a few large firms. This difference is clearly evident in Arvin and Dinuba, the two California communities studied by Walter Goldschmidt in the mid-1940's. Arvin, the large-farm community, is short of skilled tradesmen of all kinds.

In the early 1960's, farm laborers and foremen were 36 per cent of the labor force in Arvin, 13 per cent in Dinuba. Professional and related skilled trade and service staffs were 6 per cent of the labor force

in Arvin, 15 per cent in Dinuba. In Arvin in 1960, 19 per cent of the population over 25 years had completed high school. In Dinuba, the small-farm community, the figure was 38 per cent.[1]

These considerations suggest that a major area in need of further research involves the effect of large-scale firms on the education, composition, training,and balance of the labor force in rural communities. The quality of the people is the ultimate test of a community. This should be the central focus of any study that attempts to assess the impact of large scale firms in rural areas.

The effect of firm size on the environment is closely related to effects on people. What has appeared to be an example of economies of scale in agri-business production often turns out on close examination to be an example of successful transfer of pollution control or waste disposal costs and consequences to the neighboring community. Examples include packing plant and feedlot wastes in livestock feeding areas, water pollution through heavy use of agricultural chemicals in irrigated areas, watershed and water table deterioration where large-scale drainage has been attempted, and the disturbance of ecological balance associated with heavy use of insecticide and related agricultural chemicals.

By law, the National Environmental Policy Act now requires that a study of the environmental impact of any major federal investment or development project shall accompany the project proposal. Admirable as it is, this requirement fails to cover the many private developmental decisions that together may have a greater effect on the environment than do public investments. This applies with particular force to the development of large scale agricultural firms. In an urban and industrial setting, the agencies of government are sometimes strong enough to enforce pollution control and waste disposal policies on large private firms. This is rarely the case in rural areas. Government is weak, all to often dominated

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[1] Bruce L. LaRose, "Arvin and Dinuba Revisited: A New Look at Community Structure and the Effects of Scale of Farm Operations", unpublished manuscript, Department of Agricultural and Applied Economics, University of Minnesota, March, 1970, and U. S. Census of Population, Characteristics of the Population, Part II, California, 1960.

by the large firms, and unable to devise, enact, or enforce environmental protection measures.

A substantial body of professional literature is now developing with regard to agriculture's responsibility for environmental problems. With few exceptions, this literature does not identify the differential impairment of the environment by size of firms. If the major polluters are large scale firms, the technical studies rarely say so.

What is now needed is a research effort that will alert communities to the potential environmental costs of large scale agri-business firms. It is clear that not all of the environmental deterioration traceable to agriculture is caused by large firms. But it is also clear that much of it is. Rural communities are beginning to be aware of the need for zoning to protect against residential misuses of land. It is ironic that some rural communities now regulate residential lot size and household septic tank installations but remain unable to control the pollution caused by large agricultural firms.

The ultimate ability of large-scale firms to externalize costs is measured by their capacity to pass on cost-of-production increases to consumers. It is this possibility that poses the most serious long-run threat from large-scale firms in agribusiness. As long as there are alternative sources of supply from a large number of relatively small-scale farms, the pressure of competition compels large firms to pass on cost reductions to the consumer. Many would argue that the consumer has been the principal beneficiary of the remarkable increases in agricultural production efficiency over the past half-century. The family type farmer has been notoriously unable to retain many of these benefits and his relative income position shows it.

In this structure of large and small farms, the large farm appears to be efficient, cost-conscious, and the source of much of our efficiency in agricultural production. But this could well be a transitional phase. If there are only large farms, the potentials for collusion, market sharing, restrictions on entry of new firms, and outright supply control are enormously increased.

It is a part of our mythology of large firms that they are efficient. But the key question is: efficient at what? For very large farms, the answer is clear: At the exercise of market power. We have never witnessed the exercise of market power by truly dominant firms in agriculture.

We have only industrial analogies to guide us. If the large firm has its power base in the ownership or control of land, there are legitimate reasons to fear that industrial analogies may be misleading.

There are few large-scale business firms, apart from mining and forest products, that can look to land value appreciation for any substantial part of their long-run prospects for firm growth. The situation in agriculture will be quite different. There is well documented evidence that much of the non-farm capital that has entered agriculture in the past two decades has done so in anticipation of capital gains in land. A desire for food is not the only source of the demand for land that has increased its price. Rural land is increasingly demanded by a variety of non-farm users, for residential, recreational, watershed protection, and many other uses.

The effects of local monopolies of rural lands in the hands of a few large agribusiness firms will not be confined to the consumer's food budget. It is in his role as user of rural land for non-food purposes that the consumer may feel the impact of rural land ownership concentration most keenly. Food can be imported. The consumer can go abroad in search of cheaper recreation or residential amenities, but he cannot import the sites. The effects of concentration in agriculture are quite likely to drive up the relative price of food, in the long run. They are certain to drive up the costs of non-food producing uses of rural land. It is this consequence of a trend toward large scale firms in agriculture that should be of greatest concern in an affluent society.

The research that is called for is an inventory of who owns rural America, and not simply its agricultural land. Recent history is replete with examples of a belated realization by states once considered rural-Colorado and Montana are prominent examples-that their most valuable recreational resources have passed silently and swiftly into a few hands. The need to alert rural communities to the problems of land monopoly sounds like an echo from a 19th century cry. It is all too real and current.

Rural communities, especially in Appalachia, New England, the Ozarks, and the Mountain States, need help in the development of land policies. The local political structure frequently makes it peculiarly difficult to persuade them that the regulation of land transfers is in their

interest. And in the states most affected, support for the research that is needed is often weak even at the state level. A relatively few local communities currently have control, such as it is, over the nation's recreational lands. A national effort is needed to help them to accept and discharge this responsibility.

A part of the reason why big firms are attracted to agriculture can be traced to the heavy capital requirements of modern agricultural technology. Special buildings for poultry, complex feed formulas that require expert mixing, special seeds, highly tailored fertilizers, high-capacity field equipment, $12,000 trucks, $20,000 tractors, and $30,000 combines all put a heavy strain on the ability of a farm family to finance a large and well organized farm. Much of the vertical integration that has occurred in American agriculture is a result of the supply of credit to farmers by firms supplying production requirements or processing farm products.

But this is only a part of the explanation. In many types of farming there are added attractions to big firms that grow out of our tax structure and our system of government price supports for agriculture. The price support program reflects conscious policy. The tax advantages for big firms are an accident, and were almost certainly unintended.

Because we have a graduated and progressive income tax, and because we tax capital gains at a low rate which becomes a flat rate for incomes above about $52,000 (married couple, filing a joint return), we have built in a strong incentive to convert ordinary income into capital gains. This option is of little or no value to the year-to-year operation of a family sized farm. It is of great value to a high-income taxpayer who can use non-farm income to invest in farm capital which can benefit from capital gains tax treatment. The most common examples involve beef breeding herds, tree and vine crops, large dairy enterprises, and horses.

Big firms have been created to channel capital into these enterprises in order to take advantage of capital gains tax treatment. Movie stars and oil millionaires have become ranchers. Citrus, tree-nut, and vinyard properties have inflated in value as a result of competitive bidding from wealthy investors. The economies of California, Texas, Florida, and the Mountain States, to cite only the best publicized examples, have been

distorted by an inflow of capital that is basically seeking a tax shelter.

This tax shelter function of agriculture is inextricably related to its land base. A careful review of prospectuses issued by firms seeking investors in ranching or beef feeding and slaughter enterprises makes it clear that the major attraction is prospective land value appreciation. The firms that have gone spectacularly bankrupt in recent years, headed by the Black Watch Angus enterprise, have been those in which the investors had only cattle from which to reap capital gains. Someone else held the land. The tax shelters that function best are ones in which the investors have secured their investment with a stake in the land as well as in the animals, orchards, or groves. The lesson is clear: If you want a safe tax shelter in agriculture, make sure your investment includes rights in real estate.

An operational rule of thumb in cattle ranching at present prices is that a ranch buyer can afford to pay from $600 to $800 per cow-calf unit for ranch land. That is, he can afford to pay up to about $800 for as many acres as it takes to provide a year's feed supply for a cow and calf. A price of $800 can be justified only by a highly efficient ranch operation, and an optimistic long run appraisal of beef cattle prices. In mountain ranching areas of Colorado, Wyoming, and Montana today ranch land is selling at twice the prices any operating rancher can afford to pay. In 1970-71, prices up to $1500 per cow-calf unit, or more, were being paid without hesitation.

How can buyers afford these prices? There are two answers, apart from the romance of ranching. Some of the ranch buyers expect to sell off or lease a part of the ranch land for summer residences or "second homes." They are thus buying into a dual enterprise: a ranch and a real estate development. But the major explanation is that they are using the tax advantages that come from the use of cash-basis accounting (which the Internal Revenue Service permits in farming but not in other businesses) and capital gains tax rates to bid up the price of land. The richer the investor, the greater this tax advantage. The result has been described as a negative income tax for the rich.[2/]

2/ Charles Davenport, "A Bountiful Tax Harvest", Texas Law Review, December 1969, p. 9.

These tax advantages are dramatic in ranching, tree-nut groves, vineyards, and specialized livestock breeding enterprises. They are less attractive but still real in ordinary farm land. Some of the fun was taken out of the tax shelter game by the federal Tax Reform Act of 1969. For long-term capital gains in excess of $50,000 the tax rates for individuals were raised from a maximum of 25 per cent to 35 per cent, effective with the tax year 1972. For corporations, the capital gains tax rate was raised to 30 per cent, effective in 1971. These still remain highly attractive rates to investors in the top income tax brackets. They can afford to bid this advantage into the price they offer for land.

This is part of the explanation for the rural taxpayer revolts against the property tax that have erupted in recent years. Land prices have been bid up by non-farm buyers to levels that have no relation to farm earings for ordinary family farmers. The higher prices have generated unrealistically high taxes. The demand for second home sites, outdoor recreation opportunities, and decentralization of urban areas has come on top of these tax advantages for upper income investors. The result is a structure of rural land values that is increasingly unreal by any test based on net farm income. Farmers who have succeeded in increasing their farm size to a scale that will enable them to achieve almost all of the economies of size in production now find that their capital structure is so large that their sons cannot finance a takeover of the family farm.

Research needed in this area involve a search for ways to reduce land values to levels that can be supported by farm income. One way is to reduce the attractiveness of land to non-farm investors. Tax policy can play a major role in this attempt. In recreational areas and in areas that feel the impact of urbanization, it is difficult to avoid the conclusion that some controls will ultimately be needed on land transfers. Zoning has been tried, and in general has failed to preserve agricultural lands for agriculture. We accept restrictive zoning and building permits in urban areas as a necessary restriction on individual freedom of choice. We do not yet accept exclusive agricultural zoning backed up with farming permits as tolerable, but this may well be the price that must be paid to maintain a structure of competitive farm firms. Without some controls of this nature, the trend, in recent years points to a

clear alternative: A structure of rural land ownership dominated by large firms and corporate holdings.

Apart from specialized firms in poultry, cattle feeding, and some fruit and vegetable crops, there is almost no evidence that very large firms are more efficient when all costs are taken into account.[3/] If they prevail, it will be the result of defective institutional structures, above all the tax system, of farm programs that favor large farms, and of an insistance on freedom of choice in land transfers that is both blind and self-defeating. Rural communities have watched land values go up and farm income go down. In the final analysis, farmers will have to decide whether they want to be farmers or land speculators. If farmers, then public policy can aid them. If land speculators, their days as family-type farmers are numbered.

3/ Repeated studies by the U.S. Department of Agriculture and State Experiment Stations have shown that well-organized one-and two-man farms can achieve almost all the economies of size now available in agricultural production. See the summary of these studies by W. B. Sundquist, "Economics of Scale and Some Impacts of Agricultural Policy on Farm Size", paper presented at a Conference on U. S. Agricultural Policy, Center of Human Resources, University of Texas, April 30, 1971

Arvin And Dinuba Revisited: A New Look At Community Structure And The Effects Of Scale Of Farm Operations*

Bruce L. LaRose**

Introduction

A matter of some concern in agriculture today is the increasing importance of corporation farming and the possible ill effects upon the structure of American agriculture. This paper is not specifically concerned with corporation farms in totality, but rather, with large-scale farm operations, and the possible effects that can be demonstrated by viewing the concurrent rural community structure. Three reasons have been put forward as to why there should be concern about "super-farms" in American agriculture:

a) A fear that many of the incentives leading to large corporate farms do not result from greater efficiency or superior management, but are the result of institutional defects, particularly in the tax system, in the marketing structure, and in agricultural extension programs.

b) A fear that the trend toward corporation farming is an additional example of a trend toward the centralization of economic power and decision-making in a few hands and places, with a resultant loss of flexibility and diversity in our national economic life.

c) A fear that a rural structure dominated by a small number of 'company farms' will yield a deadening conformity and a restricted environment in which to develop the full potential of the quality of rural life.[1]

The first two reasons have been analyzed by agricultural economists, and although there are some divergent viewpoints, the evidence is beginning to accumulate against the corporation (large-scale) farm on the basis of weaknesses in the tax structure and a definite trend towards centralization

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[1]Raup, Philip M. "Some Issues Raised by the Expansion of Corporation Farming," Testimony by Philip M. Raup before the Monopoly Subcommitee Hearings on Corporation Farming, United States Senate Select Committee on Small Business, Eau Claire, Wisconsin, July 22, 1968. pp. 7-8.

*Paper prepared for Seminar in Land Tenure, Agr. Econ. 8-360, Dept. of Agricultural and Applied Economics, University of Minnesota, Fall quarter 1970.

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of economic power.[2] The third reason, the possible deterioration of rural community life, has not been the subject of extensive examination recently, nor are the experts completely positive of the implications:

> ...it is not clear that a rural structure dominated by corporation farms must inevitably lead to a deterioration in the social quality of the rural environment.[3]

This paper is an attempt to examine certain facets of rural community structure within two contrasting communities to see what the effects have been over time.

Arvin and Dinuba--two communities in the Central Valley of California

Arvin, a large-farm community, and Dinuba, a small-farm community, were the subjects of a detailed analysis and comparison in the mid-1940's.[4] The summary of findings for this previous study will provide the basis for a new examination of these two communities two decades later. The more significant findings of this earlier study were as follows:

a) The small-farm community supported a greater number of separate business establishments.

b) The volume of retail trade was greater in the small-farm community than in the large-farm community.

c) Expenditures for household supplies and building equipment were greater in the small-farm community.

d) People in the small-farm community had a better standard of living than those in the large-farm community.

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[2]As an example, the current high prices for eggs seems to be the result of a concentration of the poultry industry in a few hands.

[3] Raup, op. cit., p. 15.

[4] Goldschmidt, Walter R. Small Business and the Community: A Study in Central Valley of California on Effects of Scale of Farm Operations. Report of the Special Committee to Study Problems of American Small Business, United States Senate, December 23, 1946, U.S. Government Printing Office, Washington, D.C., 1946, pp. 6-7.

e) The ratio of independently employed businessmen was greater in the small-farm community.

f) Agricultural wage laborers were a greater proportion of the labor force in Arvin.

g) The physical facilities for community living were more extensive in the small-farm community.

h) Educational facilities were very limited in Arvin.

i) In other social and cultural amenities such as recreation centers and organizations, churches, and newspapers, the small-farm community had the edge.[5]

The foregoing points constitute the basic findings of this initial study, and they will provide the framework for a more up-to-date analysis of these two communities.

Assumptions and Limitations of the Study

The basic assumption of this study is that the two communities have remained essentially the same in character: that is, that Arvin is a community with relatively large-scale farming enterprises and Dinuba remains essentially a small-scale farming community.[6] An examination of topographic maps which included these communities indicated that the essential constrasts in scale of operations between them remained.[7]

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[5] Ibid.

[6] Detailed statistics which would enable the researcher to determine the exact nature of present land tenure arrangements were available only on the county level. See U.S. Department of Commerce, U.S. Census of Agriculture, Final Report, Vol. II, part 48--Counties, California, 1959.

[7] The U.S. Geological Survey topographic sheets analyzed were: (1) Weed Patch Quadrangle; (2) Reedley Quadrangle; (3) Orange Cove South Quadrangle; and (4) Arvin Quadrangle.

The most serious limitation is obvious, that is, the lack of field work to corroborate information gleaned from other sources, particularly the topograhic sheets. Two types of source materials, telephone books and directories, would have provided a great deal of recent information, but were not systematically available for the two communities.[8]

Despite the limitations of this study, it has been possible to compare the two communities and inferences will be made not only about the present community structure but also concerning the possible effects of farm structure over the twenty-five year span between the two studies.

Educational, Social and Cultural Facilities

A comparison of existing social, cultural and educational facilities was made and the pertinent data are presented in Table I.

TABLE I

Educational, Social and Cultural Facilities in Arvin and Dinuba[a]

	Arvin	Dinuba
Grammar schools	3	4
High schools	1	1
Hospitals	0	1
Churches	11	18
Churches per 1000 population	2.07	2.95
Radio stations	0	1
Newspapers	1	2
Population (1940)	4042	3790
" (1960)	5310	6103
" (1970)	5090	7917

[a] U.S. Census of Population, 1960 and 1970, and U.S. Geological Survey, Topographic Sheets, 1966; for newspaper data, Ayer's Directory of Newspapers and Periodicals.

The weaknesses of relating sheer numbers, or quantity, to quality is realized but, even based on the simple data presented here, it would appear that Dinuba has superior educational, social and cultural facilities. The lack of a hospital, (as of 1960), and radio station in Arvin represent significant deficiencies in the community structure. There is also a significant contrast between the newspapers published in the two communities (see Table II).

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[8] There was an exception to this. The telephone book for Arvin was available in Minneapolis and some cross-checks were possible for the data on Arvin.

TABLE II

Newspaper Data For Arvin And Dinuba

Title	Publication day	Circulation
(Arvin) Tiller	Wednesday	2351 (1995 of these distributed free)
(Dinuba) Alta Advocate	Thursday	824
(Dinuba) Sentinel	Tuesday & Thursday	2071

Source: Ayer's Directory of Newspapers and Periodicals

It appears that the Tiller is a company newspaper, based on the large free distribution, so that Arvin does not have an independent medium of communication. Dinuba, on the other hand, has two independent newspapers, one of which publishes twice-weekly. A radio station, KRDU, provides another local medium of communication for the small-farm community.

Educational facilities appear to be relatively equal, but if one looks at some educational statistics, the impact of these educational systems has not been equal (see Table III). Perhaps there have also been differences in attitudes concerning the value of an education.

TABLE III

Educational Levels Completed By Population Over 25 Years of Age, 1960

	Arvin	Dinuba
Completion of 8 grades	56.8%	69.9%
Completion of high school	18.9%	38.2%
Completion of college	2.9%	6.8%
Median school years completed	8.3	9.8

Source: U.S. Census, Census of Population, Characteristics Of The Population, Part II, 1960, California

The investment in education by Dinuba in the past has apparently resulted in a better payoff for the community than has the previous educational investment of Arvin. At the time of the Goldschmidt study Arvin had only one elementary school and had no high school, whereas Dinuba had a high school and three elementary schools. Based on the median of school years completed

by those over twenty-five years of age, this previous lack of educational facilities in Arvin has had serious repercussions for that rural community today.

Roads as a Measure of Investment in Rural Infrastructure

Data on public service delivery systems were limited for the two communities. It was thought that the investment in roads might provide an indication of the extent of investment by the individual communities in a rural infrastructure, aside from those aspects of infrastructure already alluded to such as parks and education. Roads were placed into three classifications for both Arvin and Dinuba:

1) Medium duty roads (often involving a county road or state highway).
2) Light duty roads (paved roads not usually under county or state jurisdiction).
3) Dirt roads

TABLE IV

Data On Roads In The Arvin And Dinuba Areas In The Early 1960's
(Excluding Urban Built-up Areas)

	Arvin	Dinuba
All three types of roads, per square mile	2.77 miles	3.35 miles
Paved roads per square mile	1.56 miles	3.08 miles
Dirt roads as % of total road net	44.0%	6.0%
Dirt roads as % of total road net minus medium duty roads	56.0%	8.3%

Source: USGS Topographic Sheets, 1966

It is clear that Arvin has a less dense road network. More significantly, a greater portion of this network consists of dirt roads. This might indicate an unwillingness by the community to invest in this sector of the rural infrastructure. The extremely high percent of dirt roads as a per cent of the total road network minus medium duty roads eliminates the county as a factor in the calculations. Within the built-up area of Dinuba there are two miles of non-county, medium duty roads. This would indicate a further desire to invest in a strong rural infrastructure by the small-farm community.

Demographic and Economic Characteristics

An analysis of census material for certain socio-economic data provides some illuminating contrasts between the two communities (see Table V).

TABLE V

Selected Socio-Economic Characteristics

	Arvin	Dinuba
Income statistics		
a) family income less than $3000	37.1%	24.8%
b) family income greater than $5999	24.4%	39.0%
c) median family income	$3,799	$5,210
Selected employment characteristics		
a) farm laborers & foremen---employment by occupation (as % of total employment)	36.4%	12.6%
b) professional & related services--employment by industry (as % of total employment	6.4%	15.1%
Selected retail trade statistics		
a) establishments (total number)	66	120
b) total sales, all establishments, in $1000	$7,970	$12,836
c) $ sales per capita	$1,500	$ 2,103
d) $ sales per family	$6,173	$ 8,144

Sources: US Census of Population, Characteristics of the Population Part II, California, 1960; U.S. Census of Business, Retail Trade, Area Statistics, Part II, 1963.

The data presented here indicate that the differences found in the two communities in 1946 still exist. The large percentage of agricultural laborers and foremen found in Arvin indicates that the essential characteristics of large-scale farming still predominate in Arvin. A higher standard of living is found in Dinuba, to the extent that this variable can be measured by family income and retail trade statistics.

Summary

It appears that the contrasts that existed between Arvin and Dinuba in the 1940's continued to exist in the 1960's. In only one aspect, education, has Arvin improved its relative position. This could be a reflection of the role of Kern County as the basic administrative unit for Arvin. A willingness to engage in civic affairs or invest in an infrastructure is reflected

by the contrast in governmental structure of the two communities. Arvin remained as an unincorporated community in the 1960's while Dinuba has been incorporated since 1906.

The cursory nature of this analysis is recognized. Granting the data limitations, this study tends to confirm the finding that there continues to be a significant effect on community structure associated with differences in the scale of farming operations in the two communities. More significantly, this study indicates that the effects of large-scale farming on rural community structures are long-lasting.

Comments by WALTER GOLDSCHMIDT ON:
ARVIN-DINUBA REVISITED By BRUCE L. LAROSE

The examination of information on the current conditions of Arvin and Dinuba twenty-five years after the original study of these two towns, is of more than passing interest. At the time the original study was prepared, one of the constantly reiterated criticism was that Arvin was a new town and had not had time to develop the amenities that Dinuba had. Though the report itself amassed considerable evidence to demonstrate that this could not in fact have been the salient factor in accounting for the differences between the two towns, the argument presisted in the public press. Mr. LaRose's analysis demonstrates that time was, in fact, not the essential factor, since more time has elapsed since 1944 than the towns are separated in age.

At the time of the original study, Arvin and Dinuba had, according to economic data made available by collaborators in the original study, an almost identical agricultural economic base. The failure is the more important because Arvin has had the advantage of considerable growth in its economic base. As a direct result of the Central Valley Project itself, the desert lands to the Southeast of Arvin could be opened to irrigated agricultural exploitation. I do not have information on the amount of land that has been developed in the area since 1944, but judge it to have been on the order of a doubling of acreage under intensive crop production.

Thus even though the amenities discussed by Mr. LaRose remain inadequate by standards established in Dinuba, the town of Arvin has at the present time a much larger economic base and presumably much higher value of gross agricultural production.

Such expansion was simply not available to the farmers of Dinuba, which was hemmed in on all sides by other communities. However Dinuba has not been entirely stable. There have developed there, partly because the community was a pleasant one to live in, a saw mill and a number of minor industrial enterprises. These developments, together with possibility that Dinuba became to some extent a dormitory community for people working in the city of Fresno enabled it to continue its population growth.

It is reasonable to assume that had the acreage limitation law been applied to the lands developed around Arvin, and farm operators settled on the land, not only would the community of Arvin been more closely resembled Dinuba, but one or more additional communities of like character would have come into existence.

EPUBLICAN PARTY PLATFORM, 1888:

"We oppose all combinations of corporate capital in trusts or otherwise, to control arbitrarily the conditions of trade among our citizens."

EMOCRATIC PARTY PLATFORM, 1888:

"The interest of the people is betrayed when trusts and combinations are permitted to exist, depriving the citizens of natural competition."

TESTIMONY

Ed Wimmer, Vice President
Public Relations Director
The National Federation of Independent Business, Inc.

B E F O R E

SUBCOMMITTEE ON MONOPOLY
Senate Small Business Committee

United States Senate
Washington, D. C.
March 2, 1972

SUBJECT

CORPORATE SECRECY and AGRIBUSINESS

TITLE

"There Is No Role For Giants In A Republic"

ditorial from the **St. Paul Pioneer Press:**

"The rise of the conglomerate (agribusiness farming) comes at a time when millions of farmers and farm workers have been displaced. Figures show 100,000 farmers a year are quitting the land, and 1,500,000 still in business are earning less than poverty-level incomes.

"The competition from the conglomerates could be the final crushing blow to individual enterprise on the farm. The Congress should take steps to halt the corporate farm advance while there are still family farms left to save."

FIB
ublic Relations Division
ovington, Kentucky 41011

REPUBLIC OR CORPORATE-WELFARE STATE, JULY 4, 1976

Mr. Chairman, members of the Senate Subcommittee on Monopoly ~~and Agribusiness,~~ I find it a distinct honor to appear here as a witness in the defense of the Jefferson-Madison concept of what I believe THEY believed is basic to PEOPLE-GROWTH in a free and open society.

As Vice President and Public Relations Director of The National Federation of Independent Business, Inc., which reports more than 300,000 members, farm, bank, business and professional men and women in all 50 states, I bear the responsibility of so guiding my testimony that it reflects a majority member view, the views of my fellow officers, our Washington staff, and our field force of more than 300 dedicated men and women.

We know that our nation is in deep trouble, in agriculture, industry finance, labor and government. In 40 years of traveling into every nook and corner of this blessed country, I have never found so little faith in the capacity of our free, private, competitive, capitalistic enterpris system, to meet its challenge; or so little faith in any possible return to the representative form of government we pretend to cherish.

This is true particularly with regard to the attitudes among our youth, and if these Hearings result in a program designed to restore their faith in capitalism and representative government, a loud AMEN wil be heard around the world from all who love freedom.

Let us recognize as a sign of progress in this direction, the upsur of public and legislative opinion favoring curbs on the expansion of giant agribusiness, to be followed by a breakup of other giants, but if this upsurge of opinion isn't guided into rational channels of reform, it could sabotage any attempt to preserve the benefits to be derived fro large enterprise.

So many millions of Americans are already so dependent on massive corporate combines, massive unions, and massive government, that any serious breakdown could create the mass-mob-master cycle through which 19 civilizations perished; a fact our best scholars are now accepting.

Jefferson understood the yearnings and potential of average men and women. He understood their need to be protected against predatory force and he understood their dreams of becoming somebodies in a world of nobodies. "Trust no man with power," he warned, "but bind him down with the chains of the Constitution ... for it is not to the advantage of a Republic that a few should control the many when nature has scattered so much talent through the conditions of men."

James Madison, who fathered the Constitution, proved all the reasons for this hearing on the role of the giants, when he warned those entrusted with the conduct of government, to:

> "Hold fast to programs, both rational and moral, that have as their central goal a constant diffusion of power."

Men of great learning in the affairs of the nation. Men of recent prominence in the battles in the market place, have appeared before this Subcommittee to bear witness to the abuses of "corporate oversize". To belabor the mysteries behind the growth of the so-called giants, and the threat they pose to this Republic. ... Adams, Nader, Mueller - to name a few, and while they may disagree on approaches to the problem of giantism in corporate growth, there is apparent agreement that if the problem isn't solved, the capitalistic system is doomed.

It is my hope that in covering areas in which corporate secrecy and the disastrous effects of monopoly power are so evident, repetitious material can be held to a minimum, and that whatever contribution this testimony may make in obtaining Congressional reforms which may lead to a "breakup of the giants," that whatever is said may be interpreted in its proper light.

Oversize in the growth of the giants of agribusiness, industrial combines, chain store corporations, bankholding companies, or the new multinational, multiinternational conglomerates, is no phenomenon of corporate genius. It is not efficiency of operation or price advantages to the public, but, rather, the result of massive violations of the antitrust laws, discriminatory, monopolistic practices, secret affiliation, and billions in tribute wrung from suppliers, farmers, tax evasions, stockmarket gymnastics, and the people generally.

The end result: The near end to this Republic as the last best hope of earth, and if this glaring truth goes unrecognized by the leaders of our nation at the community level and at all other levels of our society, then we must prepare for a "new order of things" and for the fulfillment very soon of the prophecy of a great Chief Justice of your State of Wisconsin, Senator Nelson (and Senator Proxmire), who said in 1873:

> "There is looming up in our country a new and dark power. I cannot dwell upon the signs and shocking omens of its advent. The enterprises of the nation are aggregating vast unnecessary corporate combinations of unexampled capital. Boldly marching, not for economic conquests alone, but for political power. The question will arise in your day: Which shall rule, corporation or man? Which shall lead, money or intellect? Who will fill public stations, patriot, freeman or the feudal servants of corporate capital?"
>
> - Chief Justice Ryan
> Supreme Court of Wisconsin
> 1873

A prophetic warning of Mr. Henry Luce, **Fortune Magazine, 1935**, foretold in this great publisher's inimitable style, exactly what we are seeing today in a power struggle that only omnipotent, unlimited government could control. Said Mr. Luce:

> **"If finally neither business nor government makes any move in the direction of breaking down big business into smaller, more compact, more mobile units; if bigness is allowed to remain the standard concept of the economy, then the American businessman - American politicians, and in short, all other American citizens, must prepare themselves for an order in which the powers of government are not limited; in which the right to risk and profit is not clear, and in which the making, the selling and even the buying of the products of the biggest show on earth are all mysteriously directed from above."**

Here lies the challenge behind this hearing, Mr. Chairman, and the question: **Republic or Corporate-Welfare State, July 4, 1976?** is the most stark reality ever to face a people professing love of God, family and country.

Giant chain store systems, huge agribusinesses, corporate banking combines, and a Congress that has ignored a condition of economic murder and political suicide being committed in the same act, have virtually **DE-PEOPLE-IZED** the American Dream, delivering unto the next generation a nightmare of confiscatory taxation, absentee ownership and control, government deficits and debts, disillusioned youth, farm lands made naked of family life, Main Streets denuded of independent banks and businesses, and a condition in our lives when the President of the United States is calling for a federal-guaranteed charity level income for **26,000,000 FREE BORN** citizens.

This is a confrontation of this hearing, Mr. Chairman, and when you declared your position in the matter of ending giantism in this nation, you were speaking not simply for the preservation of the family farm and a democratic society based on the fundamental principles we cherish as our **American Heritage**, but **your were speaking for the preservation of civilization itself - grave as these words may sound to unfamiliar ears.**

So was Justice Brandeis when he pleaded for an end to chain store growth. So was Congressman Wright Patman when he fought for a graduated tax on chains and an end to giant bankholding companies. So was Herbert Hoover when he wrote that we were "building up an economic autocracy upon which a political autocracy will rise." So was Franklin D. Roosevel when he called for an "unwinding of all the holding companies, chains and combines" in his Monopoly Message in 1939, and so was Dwight Eisenhower when he made the growth of power a cry of warning in his Farewell Address

I recall so vividly the efforts of General MacArthur to unscramble the Zaibatsu of Japan, and his final conclusion that Japanese managers had been under the control of the few for so many centuries, that the then present managers were incapable of making decisions as the head of unscrambled enterprises. The General wrote me that **"freedom of opportunity is impossible in a power economy,"** and I have always agreed with his view that the idea of a possible Russian attack was kept alive as a scarecrow to maintain huge expenditures, and that communist leaders used America as their scarecrow to keep doubtful followers in a state of uncertainty and fear.

Communism cannot feed on an economy of millions of owners of homes, farms and enterprises of all kinds, and no one knew this better than Karl Marx who wrote:

> **"One capitalist always kills many, from which comes the socialization of the labor movement, the involvement of the nations in the world market until everything is expropriated by the few."**

"When this happens," he said, **"we the communists will expropriate the expropriators."**

What I would like to ask, do the people of this country really know the identity of the expropriators of American power? Do they see in the corporate coverup and intrigue in all fields, the "mysterious control from above," that as far back as the old Public Utility Holding Company Act hearings, Owen D. Young could say he didn't believe **"ANY man, or men, have the capacity to manage the holding companies piled on holding companies"** that gave private utilities an image of public distrust that still haunts the industry.

Prior to the crash of 1929, few Americans knew where their utility company was controlled, and how many people today can name National Dairy Company (Sealtest) as operator of the Kraft Cheese Corporation? How many Americans know what chain runs their department stores? Or when they walk out of one shoe store into another that General Shoe, International or Brown owns them? Also, leased departments of their favorite department store chain? Two more stores down the block?

Isn't it true that no more than a handful of consumers know that Kroger controls Top Value Stamp Company? Super X Drugs? Discount houses, huge dairy operations, bakeries, meat processing plants, broiler operations, canning companies, candy factories, et cetera? In some cities operations under three or more different names? The topflight operator of ..... Buffets was unable to lease space in several shopping centers because the

developers were "committed". A call finally came from Montgomery Ward, "come to Chicago," where officials stated simply: "We want to buy your company."

Montgomery Ward operates Royal Chef Restaurants. Has bought out big name restaurants as have other big chains, nearly all of which choose who and what shall be their competition in centers they control, and in some of the bigger shopping centers a conglomerate like Rapid American may own three to six (or even more) chains, but the names Rapid American or Glenn Alden never appears.

My question - **WHY NOT?** Why this "corporate secrecy"? Why not a regulation that says "Subsidiary of Montgomery Ward", etc., in prominent letters? Why not "General Foods' coffee----formerly Maxwell House"? Why not "Holiday Inn - subsidiary of Gulf Refining"? Why not "Federated Department Stores, formerly Shillito's, Lazarus, or Fox"?

Federated opens a store or buys a competitor in a given community, thereby operating under three or more different identities. It cries "discount" from one location and then charges itself with misleading advertising from another location. A top official of Federated told students in Miami that "absentee ownership and control has created the greatest crisis in America since the Civil War," but how many of those students knew who and what was Federated?

Let me inquire, please, is this a brand of corporate secrecy that will escape investigation? Is it secondary in importance to knowing the inside workings of a conglomerate that juggles its accounting? Plays checkers with its subsidiaries, and makes the IRS look like H. R. Block & Company? Do we have a "role of the giants" here that makes Heublein, Inc. (alcoholic beverages) buy up Kentucky Fried Chicken -- a sure shot that Colonel Sanders "finger lickin' good" chicken will taste better washed down by Heublein?

I wonder if any conglomerate would swallow Kentucky Fried Chicken enterprises if they had to conglomerate the name? Wouldn't this be one effective approach to reducing mergers? So IRS could collect more taxes and 'Frankie and Johnny' would know whose chicken they were 'finger lickin'?

Shouldn't the housewife know that 90% of the cereal she puts on the table comes from FOUR companies; the toast she serves from a conglomerate in Kansas City, and the butter and cream from giant Borden, National Dairy, Golden State, or Foremost - the latter being in the whiskey business, one of the biggest wholesale drug operators (McKesson & Robbins), and owner of a myriad of unidentified corporate entities?

As for old-time secrecy uncovered in the Robinson-Patman Act investigations, it was brought out that A&P forced billions of dollars out of suppliers in secret arrangements and payoffs that enabled them to buy up great holdings and expand and expand until they had virtual control of the fruit and vegetable business in the areas they served. A&P reported 10% of all retail food sales, and in advertising campaigns paid for largely by their big suppliers, they were able to bulldoze countless thousands of independent suppliers and retailers into the ditches of bankruptcy, ruining uncounted numbers of small growers, poultry raisers, dairy plant owners, and small dairy producers.

Consider the charges made by the National Farmers Organization and National Farmers Union that 60 million consumers passing through turnstiles every week give the giant chains a power that enables them to yo-yo the price of pork, beef, lamb, dairy products, or any other agricultural commodity; that with every exercise of this power, more country schools and churches are emptied, and, says a South Dakota report: "For every six farmers who leave the land, a small business turns out its lights."

Yet, we who seek an end to such power are accused of suffering from nostalgia for the "Hiram hayseeds with a foot on a rail and a straw in the mouth," as being representative of American agriculture.

As Dr. Earl Butz put it, prior to becoming U.S. Secretary of Agriculture: "Farms are going to get bigger, and you farmers better conform or else," but while he was saying it, the best equipped and biggest independent farms in the country were headed for the auction block because they didn't have the profits of big conglomerates such as British Petroleum with its giant feed lots, or Tenneco with nearly 100 subsidiaries to fall back on.

Our National Federation of Independent Business, and other organizations such as NFO, NFU, NARD, IBA, and the hundreds of state associations and local Chambers of Commerce we work with, are not anti-bigness, nor do we or they uphold inefficient small enterprise as a way of life. We simply believe, with men like Brandeis, that a release of the "energy, initiative, resourcefulness, inventive genius, leadership, and enterprise of the many" is the only approach to limiting the growth of giantism which Justice Brandeis believed was "a moral and constitutional responsibility of government." ... How else to prevent bigger welfare programs?

Probably no better example of the far-reaching role of giantism could be found than the ramifications of Sears Roebuck, described by the Fairchild News as "a sociological and psychological factor in the existence of the nation and even the world; its life line coursing through all walks of life."

Fairchild went on to say that Sears sells goods to one out of three families in the U.S., and is "capable at any time of delivering a knockout blow to its competitors - - wanting Montgomery Ward to be strong to keep the government off its back."

A bare glimpse behind the velvet curtain of this monster (which catalogues Rural America and adds up $10 billion in sales and more than 1,000 outlets) reveals a series of violations of the spirit and intent of the antitrust laws, and a hold on public opinion that is without a parallel in this so-called "Free Republic".

Staff researchers of the House Banking and Currency Committee reported Illinois Continental Bank holds two interlocking directorships on the board of Allstate Insurance Company, subsidized so heavily by Sears Roebuck.

One of the two men is not only a director of both Continental and Allstate, but is president of Sears. Another Continental director is a director of Sears and Chairman of the Board of Allstate Fire and Allstate Life.

Sears' Board Chairman is a director of First National Bank of Chicago - which is so big it could make many conglomerates look like pygmies. In turn, the Board Chairman of First National Bank & Trust Company, fifth largest Chicago bank, has a director on Sears' board, and there is a Sears Bank and Trust Company in Chicago, and Allstate Life owns 10% of its shares.

So, what do we have in this instance? A chain holding company holding a bankholding company? Does anyone really know what it actually is, or what it represents? What effect - such power in foreign countries?

Look at Cleveland, Ohio, a dying city surrounded by a ring of Sears shopping centers that draw people from its core and from all surrounding communities, sucking the lifeblood from its economy like a huge vampire.

For many years there was a rule in this country that a corporation couldn't operate its own mutual fund, but Sears succeeded in having it repealed, and created the Allstate Enterprises Stock Fund, a subsidiary of Allstate Insurance with 8,000 salesmen and a million prospectives. Fifteen million shares were registered which were sold out overnight.

Sears is building the world's largest office building in Chicago. Has a 50% or more interest in 105 manufacturing companies. Operates a chain of finance companies. Finances over $2,500,000,000 in credit sales reporting 18% interest earned. Is in the industrial supply business. Has

Sears Allstate Motor Club. A tie-in with RCA and Shell Oil. Moving heavily into the floral business. Operates restaurants under old names with no Sears identification in view. Runs drug stores, tire centers, service stations, and income tax preparation stands - Sears Towns - and in recent months has tied up with the Marshall Fields chain in a joint development company to build gargantuan shopping centers that will include housing, educational and recreational facilities - phasing out all concessioners who might compete with its own chain; and who knows what else?

The retail business of 1971 reached a total of $350 billion that is being monopolized, terrorized, bureaucracy-ized and socialized - not for any reasons of "efficiency" of size, or for the public good, but to satisfy the uncontrollable greed of its architects.

Senator Hugo Black, who carried his sentiments into his Supreme Court decisions, said in 1935, that "chains in everything will grow in such size and power until someday America will be controlled by a few corporate masters."

Senator Burton K. Wheeler predicted an "economic plutocracy," and Senator Joseph O'Mahoney, one of the greatest minds ever to grace the U.S. Senate, pleaded with those who feared monopoly power to "keep the faith"; that this government "is not blind to power, and once formed, the American people will come to the defense of their Heritage."

These men were Democrats, but what about the statement of Senator Barry Goldwater in 1958 when he spoke of the possibility of "one corporation controlling retailing," and what about the late President Eisenhower and some of the other most outstanding Republicans of today, in both the House and Senate, who see what Black, Wheeler and O'Mahoney visioned so many years ago? - "Giantism biggest U.S. threat."-Bob Taft,Sr.

John K. Jessup, Chairman of the Board of Editors of Luce Publications, voiced the challenge before this Committee and before Congress, The White House and federal enforcement agencies, when he declared in Life:

> "Fifty years ago all corporations were limited in their right to own other corporations. They can be limited again. A law providing for some form of federal incorporation could change the whole course of corporate development." Mr. Jessup continued:
>
> "Such a law would be unwise (our own position) if it reduced the size of business units below maximum efficiency, but many businesses are too big for their own good. They have long passed the point at which (one economist describes it) the savings of large scale production are offset by the wastes of large scale

(see next page)

(Jessup quote continued)

> oversight. ... No government can ever locate that point exactly for every industry, but ours can at least make a start; WE CAN OPPOSE UNNECESSARY GIANTISM."

Both the **Detroit Free Press** and **Detroit Daily News** made the same recommendations, but included labor, and both agreed that if nothing is done along these lines, then some new form of control over the operations of the giants will have to come.

The president of National Biscuit Company suggests manufacturers might have to create their own jointly owned distribution systems to compete with the chains. An excuse given by some officials of huge agri-business conglomerates who view the economy as a smorgasboard at which to continuously gorge themselves with more companies; to be powerful enough to deal with the giant distributors. Where does this combination leave the individual entrepreneur if not in **economic oblivion?**

During the period of 1900 to 1904, Senator William Mason (Illinois) saw what was to culminate in the Penn-Central bankruptcy and the decay of independence under unenforced laws designed to preserve this Republic, when, in the midst of his fight against the Rockefeller-railroad-magnate-combine, he castigated lawmakers for introducing anti-monopoly legislation at the beginning of each Congress, only to let it die and then re-introduce it again with long, useless studies that get nowhere.

Haven't such words as these echoed down through centuries of neglect of the power issue, and haven't they proven to be true? In the very same year, 1904, in which Senator Mason felt so helpless, the **Wall Street Journal** looked at the power problem and said, editorially:

> "Where else has there been such concentration of capital as in the U.S.? Nowhere else does it involve so much grave peril as in this country, for it raises the question whether free government may not break down under such financial power aggregated in so few hands. It is just this situation which is responsible for the prevailing unrest and discontent."

Sixty-six years later this same great publication (whose editors have shown unlimited guts in reporting the shenanigans of its subscribers) featured an article by Lee Barton, staff writer, in which Mr. Barton looked into the future to see the last company in the U.S., General Motors, being taken over by "**American Consolidated Everything Corporation.**"

Samuel Pisar, in another fact-packed analysis of the multi-international conglomerates (which Peter Peterson wants Congress to help some more) declared:

> "Feeding upon itself like a sorcerer's apprentice, the multiinternational entity has detached itself from its American moorings, re-surfacing on all continents as something infinitely more complex, but without allegiance to any sovereign nation or political doctrine - a new stateless challenge roaming the globe in disregard of national law, fiscal supervision or prevalent business standards.
>
> "If political power is unable to lead in the attempt to create orderly ground rules, it will have to follow economic power in the creation of a supernational, multiinternational system of rules and institutions without which the system will not survive."

Mr. Chairman, members of this Committee, I beg you, tell us what you think we can do to preserve this Republic. Can there be any good in allowing the ITTs of "I Took & Take" to build their corporate empires without any ground rules or curbs on their appetites? Did Paul Jones, Glenview, Illinois, State Bank, put the right tab on them when he said they suffer from "Megalomania"? Was President Nixon playing mouthwash politics when he said "we are on the Roman road to decay", suggesting we do something about the giants before they UNDO democracy? Are we to ignore Oren Staley, President of NFO, who says the agribusiness conglomerates and their Siamese twin counterparts are moving into all parts of the economy and the world, and are putting out the lights in Rural America? Can we ignore a Willard Rockwell who sees the loss of our economic independence and markets at home and abroad as a world disaster? A disaster that can be prevented only by unifying the family farmers, independent businesses and local bankers behind the fundamental principles that gave meaning to free enterprise and representative government?

"America's Vast Heartland Grows Still", headline, Detroit Free Press, November 16, 1971, under the byline of George Cantor who unraveled a heartbreaking account of land-fleeing farmers, children being herded into the city; the words of a State Senator rancher, farming 28,000 acres: "It's all going back to Darwin - survival of the fittest." Fifty-two families down to one, and boarded up stores in Newell, Michigan; two grocery stores, a druggist, cleaning plant, etc., GONE. The doctor so far away you won't dare get sick "when the snow's down".

On my desk is a letter from Governor Forrest H. Anderson, Montana, who states that his State is being taken over "by huge agribusinesses", and he doesn't know what to do. He wants to know if Wimmer knows what to do. ... Another letter from James Exon, fighting family-farm-minded Governor of Nebraska where support is building up behind a bill to

outlaw purchase of Nebraska farm land by any corporation with more than $3 million in assets. He views every corporate takeover with angry alarm, a feeling shared by Minnesota's Governor Wendell R. Anderson who promises support for any legislation that is designed to stop the outsiders from land-grabbing Minnesota.

These men, like Jefferson and Madison, like John Knight of the Detroit Free Press who called the giants "the curse of America", are either right or wrong, and if they are wrong, then for God's sake let's quit fooling our kids with free enterprise and representative government talk, and send our Declaration of Independence and Constitution to some undeveloped country where people can use them in their pursuit of peace, prosperity and happiness as they were once pursued by non-welfared Americans.

Surely, the thought of such a catastrophic event should strike TERROR into the hearts of any American who loves his flag and what it stands for: "Freedom Under God" - not Charity Under the State - the Welfare State which the experts say we will "march" to, July 4, 1976. ... If not, why are we talking about guaranteed annual wages for 26 million free born Americans, and passing out billions of dollars in subsidies, and getting ready for over $100 billion in federal deficits in three years?

I repeat the question, Mr. President, Mr. Chairman, and Members of the House and Senate of the United States: If the big chains and agri-businesses, and bankholding companies, are so good for this nation, why our debt, crime and welfare-ridden cities? ... Why the liquidation of the middle classes by confiscatory taxation? ... Why the frustration of millions of our youth who have no faith in free enterprise or representative government, and why such abject fear of Communism that we shake and quake, and spend and spend and tax every time the commissars announce a new ship, missile or submarine?

Washington libraries, basements, dungeons, files, shelves, and closets are stacked with the results of hearings on the Sherman Act, and all the way up to the hearings on Robinson-Patman, Bankholding, Celler-Kefauver, before which I testified, FTC, FCC, SEC, ICC, Justice, Small Business Committees and subcommittee investigations by the hundreds have revealed the destructiveness of OVERSIZE - each searching party to finally lose what they were hunting for, on the next Congressional calendar.

Persons appearing before this and earlier committee hearings on monopoly power have placed considerable emphasis on the merger-mad drive of Harold Geneen, ITT. They have enumerated the events that led to the economic and political insanity that culminated in such a bigamous, corporate marriage as the New York Central and Pennsylvania Railroad with

some 400 subsidiaries. The merger consummated AFTER our NFIB office (Covington, Kentucky) and such economists as Leon Keyserling, predicted it would result in the biggest bankruptcy in corporate history.

In a speech in Washington, attended by Members of Congress, ICC officials, a number of lawyers representing the railroads, Mr. Keyserling, and representatives of the press, I said that the president of the Pennsylvania had argued the merger would lead to "savings to be used to improve passenger service," but that on a later occasion he declared: "We will have at least $100,000,000 more to invest in non-railroad enterprises."

My point is, here we had a demonstration of corporate secrecy and giantism that unquestionably has put the railroads on the track of ultimate nationalization if present trends continue; so what now?

Did the American people have any idea of what was really going on behind this merger?

Did the directors of either railroad know of the manipulations of the few? Did the bankers and the Supreme Court know?

Was there more than a handful of otherwise informed people in high public office who had taken the trouble to find out that the Pennsylvania owned hundreds of thousands of acres of valuable, undeveloped land, housing developments, shopping centers, entertainment and recreational properties, plus all those buildings on Park Avenue; plus trucking companies, airline services, and additional investment properties no man or group of men could possibly guide in the public interest?

Someone has brought out in these hearings that a company like Maytag must report virtually all of its corporate affairs to the IRS and other agencies, but Frigidaire can lump its reports with those of General Motors. This causes me to ask: what about Champion Spark Plug Company vs. AC Spark Plug Company? Fisher Pen Company vs. a Gillette?

It took 25 years of unceasing effort to win separation of GM from du Pont - amid predictions of a stockmarket crash and other eruptive forces that would "reverberate throughout the whole economy," but stocks of both companies went up, GM was released from du Pont's monopolistic position in selling and servicing major needs of the giant motor car manufacturer, and GM officials were free of the du Pont influence. All over the country it was said it couldn't be done, but it was, and if the drive to separate GM from GMAC had succeeded, it is very likely that no fewer than a thousand auto finance companies would still be in business, and Ford and Chrysler would NOT have entered captive financing.

Belaboring General Motors has become almost a habit, but isn't it fair to question the enormous power of this giant and the union power

that accompanies such size? Shouldn't we ask WHY a takeover of AC with no reduction in the cost of AC plugs and no quality superiority over an independent such as Champion? Did we get more sturdy auto bodies when GM absorbed Fisher Body? Did GM build a superior refrigerator after absorbing Frigidaire? Ought not the retailing of automobiles be completely free from competition from either GM-owned or controlled retail outlets? When do buyers know when they are not dealing directly with General Motors?

Prior to 1889, no state had conferred upon any corporation the privilege of buying up the stocks of another corporation, but in that year the State of New Jersey changed its laws, allowing a corporation to file and proceed to buy the stocks of another corporation or its properties, and to issue stock as payment. Right here is where our present "role of the giants" had its real beginning.

By 1893, all any corporation had to do was put a clerk in some hidden office in the state in order to bypass the antitrust laws of any other state, and by putting three employees in New Jersey, there wasn't anything the merger crowd couldn't do. In quick succession, Delaware; Oklahoma; West Virginia; Maine; South Dakota; New York; and Nevada fell in line. We know pretty much about what followed until the 1911 Standard Oil decision.

Out of that breakup were born nearly 2,000 new competitors in the oil industry. Wildcatters flourished and a new era was opened, but today Standard of New Jersey is operated like an empire - a government within a government - and its subsidiary, Humble Oil, is moving into every part of the country, swallowing up competitors, masquerading under numerous aliases, and is now big enough to swallow its parent.

Standard of Indiana absorbed three insurance companies in succession. Standard of California swallowed Standard of Kentucky, et cetera, et cetera, and across the whole country, independent dealers (so-called) compete with their own masters, are ousted from their little businesses on the slightest pretence, and in many cases forced to take on rigged games and trading stamps, with no recourse to regulating agencies that promises relief.

Operation of a service station is a natural incubator for the development of individual enterprise and economic independence, so why not divorcement of the giants from operating tire, accessory or retail outlets of any kind? From operating motels, restaurants and a myriad of other enterprises opened with billions of dollars in depletion and double depreciation allowances? This country's free enterprise was supposedly conceived to provide an opportunity for the greatest possible number of NOBODIES TO BECOME SOMEBODIES, but we let the monopolists reverse the process, and we are making NOBODIES OUT OF SOMEBODIES - all the way up and down the economic ladder.

May one wonder if we Americans haven't shown the most abject submission to corporate oversize of any people who ever had a taste of freedom? Has our worship of Standard Oil to today's K Marts become a parallel to those who closed their eyes to murder on the high seas, rustling in the stolen silks of the Captain Kidds? Has the vassalage of dependence become preferable to independence - if there is attached to it a promise of "something for nothing" among the junk of the discounter, or in a handout from the state?

Mr. President, Mr. Chairman, Members of Congress and federal agencies delegated with the responsibility of strengthening and enforcing anti-monopoly laws, I say to you that no person, young, old or unborn, is escaping or will escape the dire influences of the giantism that pervades every function of this society, and I say to you, with Oliver Wendell Holmes, Lord Acton; the many patriots among NFIB members, W. W. Swaim of NFO, Congressmen Don Clausen, H. R. Gross and John Dent, and, yes, I say with all the Presidents since Washington, that only in decentralization do free men keep their freedom, and if we fail now to meet rural and urban, national and international challenge, our youth will meet it in ways that may break our hearts. They're in the first stages of open rebellion against what they have identified as some kind of - "ESTABLISHMENT", but are as confused about it all as a termite in a plastic yo-yo.

Yet, who in high places could undo any confusion by telling them how Jimmie Ling put an LTV together with hundreds of millions in defense dollars? Take over a Wilson Packing Company in an overnight maneuver, or a Jones & Laughlin - with more LTV paper money? Who could justify Greyhound's conglomerate merging with Armour's conglomerate? Goodrich appealing to Ohio's Governor to protect it against Gulf & Western; Host, Inc. absorbing Cudahey; Meshulam Riklis trading Rapid American Paper for Glen Alden Paper? ... Corporate secrecy, a corpocracy?

Riklis owned 13% of Rapid American; Rapid American owned 50% interest in McCrory; McCrory had 14% interest in Glen Alden; Riklis also chairman of McCrory; McCrory "owned" Best & Co. and Lerner stores, and with Lerner, McClellan-Gleen, Green, National Shirt Stores, Shopmobile and McCrory restaurants under some other alias (all of which may go into a single McCrory shopping center), and ALL appearing in the public mind as "COMPETITORS".

Add to this, Rapid American-Glen Alden-McCrory cross word puzzle, the control of Schenley Distillers; and through its RKO-Stanley-Warner holdings its theatre operations; and through its BVD and Playtex Divisions operating in 32 states, and where do we end up except in a suffocating veil of secrecy and corporate giantism?

Congressman H. R. Gross (Iowa) introduced me a long time ago as a practical idealist, and I want to be idealistic and practical about this issue. It doesn't take much of either to know that in this Rapid American, Glen Alden, McCrory corporate menagerie we have a non-free, non-capitalistic conglomeration of economic power that the body politic is presently unable to cope with. It is true that FTC, Justice, and Congress have held in check enough economic power to give us our chance for a turnabout; a chance to unscramble these conglomerates, but if it all boils down to a Vietnam approach to the problem, no major victory on any front will be possible.

People generally will agree that it doesn't take a giant to run a haberdashery, a pharmacy, neighborhood food store, machine tool shop, or a bank. That Main Street, U.S.A., and Rural America weren't opened up by giants, but by individuals who struck out across the plains and unchartered mountain passes to win their own opportunities and independence.

Individuals brought the **Chicago Tribune** to world prominence; the one store world-famed Marshall Fields (now a big chain) was an individual enterprise; the one hotel Palmer House was a family institution - world-famed. Following the Chicago fire, when 118,000 buildings were burned to ashes, it was individual men and women who built a new city out of those ashes, just as San Francisco rose from its earthquake. There wasn't a chain or a conglomerate in existence.

Could the people of Chicago survive anything even approaching such a catastrophe today without 90% federal rehabilitation? Aren't most of the mayors and governors asking the federal government to bail them out of their sinking welfare ships? Aren't we stuck with a bigger slum problem in New York City than exists in all of Communist China?

Things are indeed in a sad state when men compare a corporate farm-operated tractor to a farm mother, in terms of "efficiency". I repeat, farm mothers in days gone by could save enough money on the sale of some chickens, fruit or vegetables to put their boys through college, many of whom have risen to world prominence. Today, a farm mother couldn't sell enough poultry at a profit to put a boy through kindergarten; yet, we trade off 3,000,000 of these mothers for who can say what?

One answer to that question might appear in a brief account of the bankrupt Black Watch Farms Corp. (agri-business), that sold cows to city cowpokes looking for a tax loophole. It was just as hard to find the head cowpoke who, when located, was said to be sitting in a million dollar mansion with a Rolls Royce at the door, and being sued by his own father.

According to the **Wall Street Journal**, head cowpoke Jack Dick had dickered Bermac Corp., a New York leasing firm, into heavy buying of

Black Watch stock with Bermac stock, which Dick reportedly sold to a Bahama bank evidently looking for a tax bonanza. Bermac unloaded more BW stock on State Mutual Assurance Co. Bermac then sued Dick. Then Dick sued Bermac and Mutual, and State Mutual sued an accounting firm in Chicago for misleading them.

Now - stack up this unholy cattle raising, cattle feeding stunt against the social and economic life of a hundred independent ranchers and feeders, and you begin to realize what happens when promoters enter the farm picture. Yet, we are told it takes a Black Watch or a Tenneco to "efficiently" fasten a milking machine to a cow, but you'll find grade school youngsters doing it just as efficiently on many dairy farms.

The great Ralston Purina agribusiness announced recently it is selling its poultry operation - after killing off hundreds of independents. Ralston Purina has opened nearly a thousand chicken, pancake and burger outlets - to run more independents out of business.

What we are doing in this country in an economic sense, is to make "the stone the builders rejected" the cornerstone of our modern body economic and body politic, and the cornerstone is crumbling under us as we watch the giants go marching by.

HUD Secretary, George Romney, has been saddled with an impossible job because we're taking the people out of the slums before we take the slums out of the people. Romney said 25 years ago that we wouldn't lick such problems if we didn't take the giants apart. He suggested Congress break up General Motors into 11 companies; Ford into five, and Congress listened and applauded, but moved to other issues also inflamed by the giantism and corporate secrecy Romney had targeted. For example, he knew what General Motors Acceptance Corporation was to General Motors: a powerful captive finance company - the most powerful in the world, and with more wealth than many of the states.

As president of American Motors, he knew that GM could buy AC Spark Plugs from itself at 12¢ each. American had to pay the going outside price. Neither did American have a captive finance company to recover its losses on car sales.

OVERSIZE? OVER-CONCENTRATION? Norman Thomas said it would deliver both political parties into his Socialist Party camp, and the hour of this delivery is so close that nothing can save the two-party system except all-out decentralization in agriculture, industry, finance and labor, patterned after the GM-du Pont divorcement, the Public Utility Holding Company Act, and the FCC regulations limiting ownership of radio and television stations to seven by any one corporation.

Failure to follow this pattern has made the Federal Trade Commission a toothless lion, the Department of Justice a mere shadow of what men like Richard McLaren wanted it to be: an arm of the law designed to protect and perpetuate the honorable growth of big business as well as small business.

Congress should set an antitrust policy that is based on constant decentralization of economic power. Congress should create a tax climate that will encourage the giants to "unwind". To franchise their countless outlets to independents because tax rates make it attractive for them to do so.

FTC has made its long awaited move against the cereal industry, 90% owned by four companies, but what is the prospect for an early settlement when we never know what the courts will do with a no-antitrust-policy?

Sears Roebuck ought to be separated from its insurance and finance companies, its mutual funds and nearly 200 factories. Sears should not own a bank, and some degree of fairer competition would result from divorcing Sears from its shopping center development subsidiary.

Congress passed recent legislation favoring newcomers to Rural America with a tax concession, but what about the independents who are there and are hiring farmers who can't make a living on the farm, and who want to keep their kids in towns? Why not a tax deduction for the independent on Main Street (simply because he is an independent) so the kids of Rural America can start a business or maybe continue one - the kind of enterprise that put Father & Son signs up from coast to coast, making Main Street, U.S.A., an avenue of unlimited opportunity?

Congress should listen to the House and Senate Small Business Committees and their dedicated staff members. Congress should end all discriminatory practices existing between big suppliers and big distributors; and listen to a vice president of Revlon who told an NARD convention of disappearing pharmacists, that the chains and discounters "no longer sell products and service, but manipulate people and money." In a few years we have virtually socialized private medicine and health care in this country; yet, millions fear the future despite bankrupting increases in Social Security and health care. ... Are the railroads next? And after that, our shipping and city transit companies?

Mrs. Virginia Knauer, Special Assistant to the President for Consumer Affairs, charming, intelligent advocate of the smalls, says the real innovations, the real inventions "start with the little guy." That "all seven of the major inventions of the petroleum industry came from the smalls" - so why not some kind of tax subsidy that encourages little guys to make it on their own instead of selling their ideas and discoveries to a giant? Why not open American markets to Americans again? Why not make

he market healthy enough for importers and exporters to do business on two-way street of fair wages, fair prices and fair profits; or tariffs ntil workers in other nations can buy our goods?

Free trade is a cradle of giantism: national, multinational and ultiinternational, because it destroys the small and medium size competitor who is paying honest wages and high taxes; but Congress gave up ts prerogatives of foreign trade regulation to dreamers.

On another front, Congress is being told that it is "no longer ossible to service smaller merchants and their smaller wholesalers beause of rising overhead and taxes," but if unholy discounts under the ame of "volume" now going to the biggest chains and distributors, were pread out, servicing would be possible, and the little guys wouldn't ave to close their own businesses and end up in a mini-or maxi-mart of ne of the giants. The role of giantism and its effect on this area of he economy is widely discussed but sadly unattended.

Congress should outlaw the use of a livelihood product as a conistent bait used to destroy the weaker competitor. Examples are coffee, hickens, carnations, shoes, dry cleaning service, milk, drugs ... . ongress should establish some understanding by federal agencies that rderly distribution policies that protect the market against predatory ractices are NOT harmful to the consumer.

Preparation of this testimony has come at a time when Nebraska's egislature is considering a bill to "end corporate raids on Nebraska arm lands," by making it unlawful for any corporation with more than 3 million in assets to acquire its farm land. By ending excessive ubsidies and tax advantages of corporate farming, Congress could take ts first step in this direction, and at least retard corporate farming rends until national legislation patterned after the Nebraska proposal ould be passed.

One conglomerate, Beldridge Corp., spent $185,000 to develop 20,000 alifornia peach trees because it had a tax advantage. The biggest rowers said there was no chance to compete against these tax subsidized onsters which now enjoy new water irrigation rights that is another orm of excessive subsidy. If Beldridge were prohibited from writing ff its peach losses on its conglomerate report, there would be no eldridge peach trees.

California's Governor Reagan knows his State is in a squeeze. He nows Los Angeles and San Francisco are falling into the hands of Bank f America, of the chain store systems like Safeway, a conglomerate uilt up through the purchase of more than a score of smaller chains - uilt up by wave after wave of loss leader selling that wrecked orderly ood marketing in entire cities. Now Safeway has entered more lines and ts role as a giant represents open economic murder. Governor Reagan

should welcome a breakup of such giants now taking over his whole State, because there is no other way to restore economic independence in California or any other state.

What else if not this as a solution to the racial problem, youth crisis, tax crisis ... ?

California, like all the states where horse racing is allowed, has state and federal officials protecting the mutuel window gambler against horses being watered or weighted. Competition is evened up. Jockeys and owners are barred from the track when they are caught violating the rules. Football players are benched for unfair tactics when caught. Basketball players likewise, but where is the sportsmanship, the fair play, in the market place where the greatest game on earth is being played? Why no rules against a little guy getting his teeth kicked out by the giants who wear the brass knuckles of OVERSIZE while the big referee in Washington sleeps on his bench?

Restoration of genuine free enterprise in this country could turn our whole welfare program around. As Congressman Wright Patman said in 1935, you either let the system provide jobs by making the system work for the many or provide relief for its victims. The Robinson-Patman Act was one approach, but when was it really enforced?

President Nixon said the "bankholding companies are a combination of business and banking that should be broken up," but look at the kind of bankholding company bill we had when it came out of a shadow boxing match in the House and Senate. We had a bill that has enabled holding companies to leap-frog from state to state like the banks in Kansas City and St. Louis that have swallowed about 40% of Missouri bank deposits in two years.

Everybody should know that America needs big banking institutions, but America doesn't need a Bank of America with 40% of California's bank deposits, and doing a branch credit card business that gives it a hold on every community in 50 states. Big banks and big businesses are required to build skyscrapers and run some of our steel mills and airlines but if those big planes are not filled with a great middleclass going back and forth to vacation resorts and buying and selling the goods produced on our farms and in our factories, the convention halls of Las Vegas and Miami will thunder with a ghostlike silence that will be felt around the world. Then it will be too late for politicians to write any history as they gaze upon the hulk of free enterprise protruding from the reefs of what the Washington Post called "corporate feudalism". What Irving Beller, CIO-AFL economist, told a Congressional Committee would "turn the country into one company owned store -- run by the government".

American businessmen of the caliber of Owen D. Young and Theodore K. Quinn, key men in the growth of General Electric, turned against "oversize", Quinn later calling giants "unconscionable monsters". Both men had learned from experience that man wasn't capable of guiding a giant, as proven in GE's continuous need of defense contracts; as proven in the Penn Central collapse. The Lockheed incident with 200 retired military people on its padded, government subsidized payrolls.

WE THE PEOPLE allowed this prostitution of freedom to go on and on until we have become like whores seeking favors wherever we can find them - risking our future until -

A great educator like Dr. George Charles Roche III, President of Hillsdale College, can tell us we stand at the edge of the "darkest of dark ages because Western man has departed from his Heritage." Until -

Daniel Borstein, Smithsonian Institute, can say "we have wandered out of our history with no place to go." Until -

Texas, a Republic within a Republic, pleads with the federal government to take over its welfare burdens. Until -

The mayor of Boston cries out: "I think we are on the verge of a breakdown of our civilization." Until -

The press, newscasters, economists and political leaders can say corporations are now more powerful than nations.

My friends, our soldiers who return from a winless war deserve something better than a winless economy. So do the youngsters who look bewilderingly upon the graft, corruption, crime, stockmarket scandals, confiscatory taxation, burgeoning welfare demands, underfinanced mental institutions, neglected children whom Congress talks of putting in day nurseries as they do in Communist China and Russia, "so mothers can do the work their husbands are unable to find."

NFIB's field force of 300 dedicated men and women know there are 80 million people working, and this is good. We of NFIB can show that we have 300,000 members who are still in business, but we also know that Congress, the mayors, governors and other officials are trying frantically to meet growing demands for new taxes. We know that ...

One man looking for a job and unable to find it, is a one-man depression no matter what you tell him to the contrary. He's having his Waterloo - now; and so are the millions of little guys hanging onto their businesses by the skin of their reserves or borrowing power. This

is no encouragement to the sons following after them, or an inducement to take down a For Rent sign on an empty store window and begin a new business.

Men who love freedom, men unafraid to confront the task of reversing all trends to unnecessary centralization of power in the United States, can write a Second Declaration of Independence to help make the first one live.

How else to meet the challenge of world socialism. How else to win the plaudits of American youth? How else to meet a federal debt of $400 billion? How else to raise enough taxes to clear the slums and care for the helpless? How else but through decentralization to keep from depersonalizing our society and denuding it of its form of government?

Either the giants must go, or capitalism as Jefferson and Madison viewed it will ultimately be declared, in the words of a committee of The American Historical Society: "Obsolete in theory, ineffective in practice, a parasite on the backs of the people, and ought to be abolished."

Peril to Independents

By TOBI NYBERG

WASHINGTON (FNS) — The elimination of the smaller, independent supermarket or food producer by price-cutting chains or major manufacturers was held up as a specter to Congress — unless Congress amends the Clayton Act to prohibit "predatory below-cost selling."

Representatives of the National Independent Dairies Association and the Independent Bakers Association described their positions last week before Sen. Philip Hart's Antitrust subcommittee of the Senate Judiciary Committee, which is holding hearings on legislation to ban below-cost or "loss leader" selling practices.

The bill (S. 1457), co-sponsored by 34 Senators, is similar to bills that have failed in this past session to get through Congress.

Both independents testified that many of their members had been driven out of business by big corporate processors, who can afford to sell bread and milk far below cost by making up losses through higher prices on other products.

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March 1972

FUTURE OF INDEPENDENTS
and
ORDERLY DISTRIBUTION AT
STAKE IN BOTH PROPOSALS

Bills Seek To Block FTC Attack On Soft Drink Licensing Systen

WASHINGTON (AP) — A Federal Trade Commission move designed to increase competition in the soft-drink industry encountered strong Senate opposition Monday.

Sen. James O. Eastland (D-Miss.) introduced legislation signed by more th 30 senators to allow so drink bottlers — and other food — product d tributors — to continue o erating under franch systems that give them clusive distribution rig in designated territories.

312,000 FARM PEOPLE LEFT THE LAND IN 1971

After subtracting production expenses from cash receipts from marketings, we find farmers received $400 Million less income than they did in 1950. - Yet produced 38% more food and fiber.

To: The Honorable Gaylord Nelson, Chairman
Subcommittee on Monopoly,
Senate Select Committee on Small Business

Hearing: The Role of Giant Corporations in the American and World Economies

Corporate Secrecy - Agribusiness

Washington, D. C., March 2, 1972

CORPORATE ACCOUNTABILITY AND THE FAMILY FARM

Sheldon L. Greene
National Coalition for Land Reform

CORPORATE ACCOUNTABILITY
AND THE FAMILY FARM

In the past months, the world has been treated to a partial aerial survey of the landscape of Mars. Mars, as we know, is some distance away from the earth, and is well suited to its name. It is an inhospitable place. Similarly, the lunar surface has been subjected to a limited but exhaustive geological survey. These achievements of man represent the high points of a project which has already cost the taxpayer in excess of $20 billion. At the same time, the Federal Communications Commission disclosed its inability and lack of funds to make a study of long-distance telephone communication.

Mars and the moon, notwithstanding their mystery, have a relatively small impact on the lives of the average American. Much greater is the impact of General Motors, General Foods, Purex, Tenneco, A.T. & T., and the one thousand corporations that do twenty-two percent of the business of the United States. Equally significant to the average American is the nature of the land itself--its resources, limitations, expendability and the character of agriculture in the United States.

The interrelationship between these subjects is simply that, while the development of data by our society proceeds willy-nilly, the data which we most require in order to develop intelligent direction is either unavailable to us or deliberately kept from us. Initially, it must be said with respect to corporate data that business and public agencies do not hold in high regard the public's right to know. Too frequently the public agency adopts an attitude toward its regulated industry not unlike that of the confessor to the penitent: "So long as you tell me everything, your sins will be absolved."

Consider these examples: The Veteran's Administration recently made a study of hearing aids in order to obtain the best buy and the best quality, but refused to make the results of the study public, because they didn't want to damage the reputations of the manufacturers of inferior hearing aids. A public agency, paid with the taxpayer's funds, chose not to disclose to the taxpayer information clearly beneficial to his interest.

The San Francisco Chronicle, on February 14th of this year, disclosed that the California Medical Association had made an ongoing study of 500 California hospitals, identifying those in which health care services were deficient. The Association reluctantly, and only after being threatened with a subpoena, made some of this information

available to a U. S. Senate subcommittee. What would a doctor say if his city failed to reveal known pollution at a local public bathing beach? Clearly the notion of responsibility to the public--even when the issue had a tangible effect on public health--was subordinate to the preservation of the good name of the health industry.

Beyond the fact that businesses, public agencies and organizations fail to disclose available information to the public, is the problem of the government's failure to collect data important to the public and public policy. For example, the government has failed to analyze the significant changes that have been occurring in rural America. We know that each year 100,000 farms are abandoned, and that rural America has sustained a population loss of 40 million people in the last 50 years. Concomitant with the abandonment of small farms and the migration to the cities of a heretofore agriculturally-dependent rural population has been the increasing entry into agriculture of multipurpose business interests, bringing with it an increase in farm size and absentee ownership of the land. Once-populous areas occupied by independent small landholders interspersed with small rural service communities are being transformed into feudalistic estates--possibly one of the most significant economic and social transformations to be experienced in our history. The phenomenon is infinitely

ore relevant than the recognition that the lines on Mars re not canals, or that the moon is sorely deficient in heese. Yet a rural sociologist, Richard Rodefeld, who ndertook a study of this phenomenon as it affected isconsin in 1970, concluded that there was "a lack of bjective, empirical information" on the subject.

> This has been lacking for even the most basic of facts, such as the respective numbers and basic descriptive characteristics of the various farm types. Except for one study, done in the 1940's, which has questionable generality for midwestern agriculture, claims as to the detrimental effects which would be associated primarily with large-scale industrial farms have come from individuals and organizations from the rural sector, based primarily upon individual observation.

To my knowledge, neither federal nor state governents have undertaken a comprehensive study of something s basic as <u>who owns the land</u>--other than to maintain bscure county tax records. Nor has a comprehensive study een undertaken of land use.

An example of the inadequacy of such data is the isparity between federal and California statistics on matter as important as farm size. The Agriculture Depart-ent of the State of California asserts that the average alifornia farm size is about 650 acres. In contrast, the ederal census identified the average farm size in Cali-ornia as no more than 450 acres--a somewhat broad statis-ical disparity.

On the corporate side, this Committee is well aware of the deficiencies in data reporting--not only regarding the identification of profits and losses among subsidiaries of conglomerates, but the extent of ownership and interrelationship between corporations which are ostensibly unaffiliated.

Finally, because the data are unavailable, we are by no means certain of the impact of vertical integration and agglomeration on single-purpose businesses, whether agricultural, mercantile or manufacturing.

Agribigness

In agriculture, however, we do know that vertical integration and the entry of big business into agriculture have produced symptoms which smack of unfair trade practices--in many instances accelerating the demise of the small farm, drying up the farmer's credit, increasing his dependency on processors, decreasing his mobility and leverage on the market, increasing his debt burden without a concomitant growth of return on investment, and so on. A brief analysis of this impact on agricultural production is useful.

As this Committee well knows, equating bigness with efficiency in agriculture is a misconception. Studies have demonstrated the family farm to be the most efficient

nit of agricultural production. Summarizing the studies ade on the subject of farm efficiency, G. P. Madden con- luded, "All of the economies of size could be achieved y modern and fully mechanized one-man or two-man farms.[1] he study concluded that the major difference between the mall and medium-sized farm and the large farm was simply hat the latter had the potential to produce more profits or the farm owner.

The issue for agriculture is less a question of arm size than it is the maintenance of market conditions hich tend to assure a sufficient return on the farmer's nvestment and his labor. Costs, the availability of redit, and market leverage are more critical factors, et they are to a great extent unrelated to actual or otential efficiency.

A review of these extrinsic factors unrelated to fficiency reveal that the family farmer is disadvantaged.

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[1]Size/efficiency relationships varied from crop to rop; however, with regard to the production of cling peaches, average cost reached a minimum with an orchard size of 90 o 110 acres when mechanized practices were used." In the mperial Valley, examination of vegetable farms having acre- ge which ranged higher than 2,400 acres disclosed that the arms under 640 acres "could produce almost as efficiently s any larger size." Producers of field crops such as otton, alfalfa, milo and barley "were found to achieve owest average cost at about 640 acres." The report found, n fact, that in these areas, larger farms extending beyond ,280 acres "were slightly less efficient." Economies of ize in Farming, United States Department of Agriculture, gricultural Economic Report No. 107 (1969).

Despite the fact that he bears all the risk of producing the food, must nurture the crop from year to year, often waiting for years before vines and trees reach maturity, too often he receives the least return of all components of the food delivery chain. For example, a 14-ounce bottle of ketchup, which costs the housewife about 30 cents, brings the farmer a little more than one penny. In contrast, the wholesaler, or middleman, who is a transient conduit between the farmer and the retailer, skims off as much as 40% of the price the consumer pays for market produce. Clerks in air-conditioned Safeway markets earn up to $5.00 an hour in parts of California, providing them with a greater return than the farmer receives for his labor, and three times the earnings of the farmworker. Consistent with the average farmer's deficient return on his investment, the farmworker's earnings average one-half the national industrial average.

There are those who would say that big business is the solution to the farm problem. In fact, the entry of big business into agriculture has caused much of the problem.

The poultry-and-egg industry, for example, has moved from production by small independent farmers into control by vertically-integrated national poultry-feed suppliers such as Ralston Purina. In 1961, a California legislative committee completed a report on vertical

is family. The U. S. Department of Agriculture and the University of California exhorted poultrymen to get bigger:

> And poultrymen followed this advice. Profit margins kept shrinking, and it took more and more eggs from more and more chickens to supply the operator and his family with a living wage.[1]

usiness-hungry feed mills, equipment producers, investors nxious to find tax-saving devices--all contributed to the ver-production. Hatcheries burdened with over-production ontracted with farmers to simply raise the chickens, upplying both feed and birds and paying the farmer a fixed mount per dozen eggs[2]--an amount that was insufficiently elated to his costs of production. Under vertical interation, the farmers claimed, "the margins are so low you eed to maintain a volume in order to stay in."[3] "The rower can't pay back his loans because of low prices, and he company, in order to make the investment bring in somehing, puts more chickens on the ranch, which depletes rices even further."[4]

Those farmers who resisted vertical integration ecame the victims of purchasers. Processors and whole-

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[1] Ibid., p. 15.

[2] Ibid., p. 16.

[3] Ibid., p. 23.

[4] Ibid., p. 25.

salers would keep the producers' price low, maximizing their profit on resale to retailers. Citing variations in the market unrelated to demand, they indicated that wholesalers "simply stated the price they wanted to pay . . . to force the poultryman out of business or into an integrated set-up." Wholesalers, they claimed, would stop buying when prices rose, forcing the prices down.[1]

Time has not corrected the problem experienced by egg and poultry producers. A recent study[2] of egg production in Riverside County, California, which produces almost 12% of the nation's eggs, shows that producers are "getting 8 to 10 cents less per dozen eggs than it costs to produce them.

Tax-Loss Farming

The foregoing distillate of the transition from independent operator to external vertical integration in the poultry market presages the future for field and tree crops, and for meat production. Shrinking profits due to the manipulation of the market, and costs of production, over-production and tax-loss farming are now being employed by conglomerates seeking to eliminate the family farmer or make him a vassal of vertical integrators.

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[1] Ibid., p. 17.

[2] At the University of California, Riverside.

Consider, for example, the inevitable impact on the small farmer of the enormous increases in production unsupported by an increase in market demand, which will follow from the addition of 450,000 acres of newly-irrigated land on the west side of the San Joaquin Valley as a result of the California Water Project. Add the factor that much of this land is owned by corporate giants such as the Southern Pacific Railroad and Tenneco. Finally, consider that the water will be delivered to the area at the mere cost of transportation--a 90% discount--presenting an enormous subsidy to those who least need it.

The greatest incentive which conglomerates and syndicates have to enter agriculture stems not from the profit motive but rather from our convoluted federal tax laws. The conglomerate often realizes its gain from supplying machinery, equipment, feed and fertilizer at one end and processing and marketing the product at the other. The gains realized from these fields and from non-agriculturally-related affiliates are offset against a loss which it willingly sustains in agricultural production. The loss is minimized or turned into a gain by taking income tax credits against the profits derived in the other, non-agricultural, fields. But the family farmer engaged exclusively in agriculture has no offset. Since his competitor often sets the market price, he must sell his product at a loss or go out of business.

In addition to tax advantages, the conglomerates realize a gain simply from the anticipated appreciation of real estate. Last year, the largest item of increase of agricultural assets was the enhancement of real estate value--a growth of $6.3 billion. Since the value of land is increased only on sale, this enhancement of assets against which the corporation can borrow funds is still not taxable until the year in which it is sold. Therefore, the speculative value of holding land and the economic leverage resulting from an increase in asset value are further inducements to the corporation to invest in and utilize agricultural land.

Unfair Competition

The result of conglomerate entry into agriculture is that the single-activity farmer must compete against producers who not only corner the market through vertical integration, but produce at a loss, deriving the benefit not from profits on the sale of agricultural production, but rather from tax gains and land speculation.

Over-production, then extrinsic control of market and costs, and tax-loss farming, continue to force efficient family farmers out of agriculture. Many of those who remain will be tied by contracts to vertically-integrated conglomerates as mere vassals or, as one farmer put it, "hired hand

Enormous industrialized farms will run for miles, interspersed with labor camps. Merchants in rural communities once surrounded by a higher density of farm owners, will lose some of their markets; the body politic of freeholders will shrink, and agricultural areas will be controlled by dominant land-owning corporations whose board members reside in distant cities.

Consumer interests could in the short run equate loss farming with lower prices, but the conclusion would be premature. Seventy-five percent of the increase in food prices in recent years is attributable to non-farm costs. Moreover, the recent disclosure that the monopoly conditions which prevail in the breakfast-food industry costs the consumer an estimated extra $200 million each year is an indication that the short-term gain is only a sugar-coated lemon.

Some conclusions can be reached regarding the trend toward vertical integration in agriculture, unwarranted as it is by economic considerations. There is a need to apply the principle of public trust to the affairs of our largest corporations in order to assure both that their conduct is known to those who will be affected by it, and that it is not patently inimical to the general welfare of the society. Laws encouraging unfair competition in agriculture should be modified to assure that the federal

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government help those in need rather than those who not only don't need help but who should themselves be helping others.

Public Trust Accountability

The duty of private landowners and major corporations to account publicly for their activities and to conduct their affairs in a fashion that is not inconsistent with the public good has its origins in the heritage of English common law. With respect to land ownership, all title to land emanated from the King as the representative of the State. In English law, the residual title that reposed in the State was memorialized in the related doctrines of escheat and forfeiture. If there were no heirs to which the land would pass, title returned to the State. Similarly, if the owner of the land breached certain obligations of loyalty to the State, the land was subject to forfeiture. As such, the notion that ownership is subject to overriding considerations of public good is not novel.

A second concept rooted in Anglo-American jurisprudence applicable to major corporations is the trust doctrine. Commercial enterprise is a privilege rather than a right, and should function consistent with the public interest. For this reason, many commercial

activities are subject to licensure. A person who undertakes a task in behalf of another or performs a function affecting the interests of a class is a trustee for that group, and accountable to that group. He has the responsibility to fully disclose his actions, to provide assurance that his conduct is in fact in the interest of that group.

The notions of public trust and the duty to give an accounting are relevant to the conduct of the thousand largest corporations in the United States. A conglomerate whose aggregate sales represent one-tenth of one percent or more of the gross national product of the United States has a sufficiently substantial impact on the consumer, on commerce, on labor, on the cost of living--indeed, on the quality of life, the environment, the allocation of resources and so on--to justify the application of the public trust doctrine to the enterprise. Accountability and the duty to disclose transcend the necessity of full and complete disclosure related to the periodic sale of stock. It is, or should be, an ongoing responsibility based upon the year-to-year affairs of the enterprise and its continuing effect on the society.

The concept is already manifested in regulation of the banking industries in the United States. The insurance

industry, for example, was the first industry subjected to affirmative regulation. It is unique because it is undertaken almost exclusively by the states, notwithstanding the interstate nature of the commercial activities of the industry. It is unique, also, in that the prospective contractual obligations of the insurance company, requiring continual solvency, have led the regulation of the industry to take on the quasi public trust analogy. The essence of insurance regulation is to impose on the company the duty of full disclosure of its financial affairs, including an annual audit undertaken by officials of state insurance departments. Investments by insurance companies are strictly regulated, and rates are subject to disapproval in the interest of the consumer and the solvency of the company.

The public trust doctrine is readily applicable to the thousand largest corporations in the United States. Legislation could be enacted determining that any business entity whose sales in the aggregate exceeded one-tenth of one percent of the gross national product would occupy a quasi public trust relationship to the United States. The duty to provide full public disclosure of its activities by way of accounting would be imposed upon the entity as a concomitant to its public trust relationship. As with the insurance, banking and communications industries,

a licensure provision could be included as well. Operations would be subject to periodic audit by way of verification of the information provided annually on a voluntary basis, at the expense of the company.

Equal Opportunity for Family Farmers

Beyond the corporate duty of public disclosure, a number of specific steps should be taken by the federal government to restore equal competition for the family farmer.

1. Tax changes. Current tax laws which provide conglomerates with unfair tax advantages should be reviewed and modified to reduce the advantage deriving from land speculation and the competitive disadvantages experienced by persons earning the bulk of their income from agriculture alone.

a) Tax-loss farming could be minimized by prohibiting tax credits resulting from the setting off of losses in agriculture against profits earned by non-agricultural subsidiaries.

b) Speculation might be minimized by imposing a tax on increases in land values resulting from other than improvement of the land or increased economic value of the land attributable to increased earnings. The tax would be payable in the year in which the increase in value occurred.

Owners who directly or indirectly derived their substantial earnings from agricultural production would be exempted.

c) To further reduce speculation, net profit from the sale of land could be taxed as ordinary income. An inordinate tax occurring in the year of sale could be reduced by application of the income-averaging provisions.

2. Acreage limit and residency requirement. The existing laws establishing the small and medium-size farmer as the basic agricultural unit of production in America might be enforced--specifically, the law limiting the supply of water from federal reclamation projects to resident farmers owning 160 acres or less. Many farmers who have contracted to divest themselves of excess acreage have not as yet done so. A measure is now pending in Congress, in both the House and the Senate, which would enable the federal government to purchase land in excess of the 160-acre limitation. If enacted into law, the bill could both reduce the acreage of some landowners and at the same time provide for the reapportionment of prime agricultural acreage among small farmers and farmworkers desirous of moving up to farm ownership.

3. Family Farm Act. Recognizing the unfair business advantages which conglomerates derive through tax-loss farming

and land speculation, Congress should enact the Family Farm Act, which would altogether prohibit engagement in agricultural production by conglomerates or large, non-agriculturally-based enterprises. The significance of this bill would be to place farmers on an equal competitive footing.

4. Encourage co-ops. Small farmers can compete with large farmers efficiently, in the event that they are able to take advantage of economies of scale deriving from common purchasing, processing and even marketing. A program of technical assistance should be initiated, providing assistance to small farmers seeking to modernize plant and equipment, who have combined in cooperatives which show a capability of reducing costs and maximizing gain from sale of produce.

5. Farmworker farm ownership. A related program should be established to provide seed money and ongoing technical assistance to farmworkers seeking to take an ownership position in agriculture. The program might be integrated with related government projects, so that, for example, excess land purchased under the acreage limitation enforcement act would be leased to individual farmworkers who have formed agricultural cooperatives to take advantage of economies of scale resulting from cooperative purchasing, processing and marketing. The seed money program would

disparities between benefits accruing to industrial workers and to farmworkers, under present laws and economic conditions. Farmworker minimum wages could be increased to close the gap between the average farmworker hourly wage and the average industrial wage in America. Similarly, benefits such as unemployment insurance could be extended to the farm labor force.

9. Marketing leverage. Since agriculture meets a national market--fruits and vegetables can be air-freighted from one end of the country to the other in a matter of hours--the question of over-production and concomitant loss of income might be considered to be a national, rather than a regional, problem. Therefore, national marketing boards might be established to minimize unreasonable competition between farmers of competing regions. The marketing boards would function to restrict productivity to that which the market is likely to reasonably absorb, minimizing uneconomic surplusses which benefit neither farmers nor consumers, but only maximize profits of middlemen.

While the national marketing boards would be voluntary, special privileges, such as federal loan guarantees, might be made available to farmers participating in the marketing boards as an incentive to participation and to maximize their effectiveness.

10. Collective bargaining with processors. Legislation compelling processors and middlemen to bargain collectively with farm associations would assure farmers a better price for their produce.

11. Zoning. Attention should be given, not to the solution of short-range pro lems, but to establishing a system which will also preserve and maximize the utilization of our limited natural resources for the future. To this end, Congress and the States should institute a system of agricultural zoning, beginning with a national survey of land resources and present utilization. The second phase of the survey would be to establish, based upon the climatological and soil conditions in each region, the most efficient uses to which the land might be put, in terms of specific agricultural, timber or mineral productivity. Next, agricultural economists would ascertain the most efficient units of production for the various uses to which land in the sector might be put. Finally, variable acreage limitations would be established for all agricultural uses benefiting from some form of federal or state assistance, such as subsidies, loans or services. These limitations would be non-restrictive and would, rather, impose flexible guidelines to assure the highest use of the land. If, for example, the optimum acreage for a farm best suited for

midwestern grain crops was 400 acres, farms in excess of 440 acres engaged in grain production would either be ineligible for public assistance such as government loans, or would pay a premium for such loans.

12. Progressive real property tax. A corollary to the variable acreage limitation and regional zoning program would be the imposition of a progressive real property tax, based upon value. The graduated property tax would tend to reduce the advantage deriving from land held for speculative purposes, and reduce the pressure for increased land values related purely to speculation rather than to increases in productivity-related income. It would also discourage the concentration of ownership of land and shift some of the burden for support of local and state functions from the homeowner to the commercial interests.

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???? WHO WILL CONTROL U.S. AGRICULTURE ?

policies affecting the organizational structure of U.S. agriculture

NORTH CENTRAL REGIONAL EXTENSION PUBLICATION 32

Agricultural Extension Services of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, and the U.S. Department of Agriculture cooperating

University of Illinois at Urbana-Champaign

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Special Publication 27

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WHO WILL CONTROL U.S. AGRICULTURE?

INTRODUCTION

THE PURPOSE OF THIS PUBLICATION is to describe the current situation and trends in U.S. agriculture, discuss the factors that will influence its future organization of production, and sketch some of the alternatives and consequences of selected courses of action and their effects upon producers, input suppliers, processors, and consumers.

When discussing the organization and control of U.S. agricultural production, a definition of agriculture as used here is in order. The term agriculture includes the production and marketing of food and fiber crops, livestock, and poultry. Although forest products are produced on many farms, the forest products industry is not specifically included.

Although processing and distribution of food and fiber commodities are sometimes included as part of modern agriculture, this publication uses the more restrictive definition just noted. However, it recognizes that vertically integrated companies may control organization of production on farms.

To include and analyze all the policies that affect organization and control of agriculture is a formidable task. This is partly so because research to help provide insights is far from adequate. In many cases policies that are in effect and the trends associated with these policies may appear as evidence but may be interpreted differently.

1. WHO CONTROLS AGRICULTURE NOW?— THE TRENDS UNDERWAY

Leonard R. Kyle, Michigan State University
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In this review, the authors spike the mental images of a uniform, stereotyped kind of farming in the U.S. by showing not only wide differences in size and gross production of farms (one-eighth of all farms produce almost two-thirds of sales), but in who farmers are and how control is exercised. Interesting IRS data reveal some "farmers" who are "affluent" but manage to lose money in farming. Large industrial corporations are still a minor influence, but a third of livestock and an eighth of crops are now produced under many kinds of forward contracts. Perhaps most weighty of all are the more intangible trends toward industrialization of the entire food and fiber system — a vertical merchandising-oriented structure in which conglomerate firms may well play an increasing role. Continued advances in farming technology add to the seeming relentlessness of trends in control of agriculture. The major concern expressed is that if agribusiness conglomerates gain control of production and marketing of a substantial portion of the food supply, they would probably be able to control prices and boost profits unless restrained by government action.

ONE OF THE KEY ISSUES in American agriculture today is "Who will control production and marketing of agricultural products?" Many are aware of the continuing decline in farm numbers and the increasing concentration of production on larger farms. They are also concerned that these large-scale production units, which are becoming more involved with integrated or contractual arrangements to market their products through industrialized "food systems" conglomerates, may some day approach the concentration of economic power now present in much of our industrial economy.

These developments could point to a future time, perhaps only two or three decades away, when sole proprietorships and the typical family scale farm units as they presently exist will have essentially vanished in the United States. Even so, many smaller part-time or part-income farms would continue to exist.

The concern among farmers and rural people about the changes that are taking place is increasingly evident. Many of the changes are not peculiar to agriculture but follow the patterns of change in the industrialized sectors of the economy. Gradually, science and technology, much of it supplied in prototype form by the land-grant universities and the United States Department of Agriculture, have made it possible for each farm worker to produce more. Output per hour of farm work has more than doubled since 1950. Some of this productivity gain is, however, rightly attributed to off-farm components of the agricultural industry.

Over time the farming units dominating commercial production have become larger. Even so, only 5 percent of America's farms are large enough to employ more than 18 months of hired labor per year and the family labor input per farm has remained relatively unchanged in the last decade.

An additional complexity of the farming sector is the increasing involvement of farm entrepreneurs with off-farm employment and investment activities. An increasing percentage of the owners of Census Class 3[1] and smaller farms, or their wives, are engaged in off-farm employment. With modern transportation and communications, it is becoming easier to combine the advantages of living on a small farm with working a 40-hour week in a nearby community. This is particularly true in the industrial areas of the eastern United States. The opportunities for off-farm employment are much fewer in the plains states and the Rocky Mountain areas. The eastern corn belt states are rapidly filling with industrial communities located less than thirty miles from many farm families. At the same time, many of the entrepreneurs of larger, more

[1] The economic classes of farms defined by the Bureau of Census are: Class 1, sales of $40,000 and over; Class 2, sales of $20,000 to $39,999; Class 3, sales of $10,000 to $19,999; Class 4, sales of $5,000 to $9,999; Class 5, sales of $2,500 to $4,999; Class 6, less than $2,500, part-time, part retirement, and abnormal.

commercial farms are also involved with professional employment and investments outside of farming. This gradual demise of a "strictly farmer" class will be described in more detail later, but it seriously affects the cross-currents of farm ownership and entrepreneurship in rural communities.

Farming Widely Varied

Perhaps the most accurate attribute of farming is the increasingly divergent nature of the operating business units, among both the more commercial (generally over $20,000 in annual sales) and the numerous smaller, less commercial ones. For example, in 1967 the Internal Revenue Service reported about 3,591 farm units which had over $500,000 in farm business receipts *(11)*.[2] About 1,479 of these were sole proprietorships and the remainder were partnerships. Also, 15,115 of the largest units, grossing over $200,000, averaged $635,000 in sales. At the same time, over one and a half million individuals reporting farm income had farm receipts of under $5,000 and taxable incomes of under $1,000.

The number of tenant-operated farms is decreasing and the number of farms with part-owned and part-rented land is increasing. Entry into farming for young farmers is still possible if they are ready to accept a smaller farm and obtain only a part of their income from farming or become tenants, but it is relatively difficult if they try to accumulate the equity to acquire control of a strictly commercial Class 1 unit. Becoming a business partner with a relative is easier for some.

The larger, more successful commercial units are putting serious economic pressure on many of the smaller units, where the operator is trying to remain and, often, to become a "full-time" farmer. Some describe the emerging trends as agrarian cannibalism! The "adapt or die" concept was never more applicable than it is in farming today. Many efficient farms, with sales of over $100,000 annually, are owned and operated by a family unit of two members with up to 18 months of hired labor. *Thus the competitive pressure cannot be blamed entirely on large corporate units.*

What changes in technology, economic forces, governmental actions, and institutions helped to create the current situation and emerging trends? What actions can be taken to modify or negate the forces now in motion or to create new countervailing forces if this is the desired course of action? A final important question that still defies answering is "What, if anything, does the public want done?" The objective of this publication is to describe the current situation in farming, reflecting on the past and looking to the future, to better understand what is happening to control of agricultural production.

[2] This and similar references are listed at the end of each chapter.

Changes in the Number and Size of Farms

Many of the institutions, traditions, and values relating to the farm sector of our economy were developed before World War II. In 1929, approximately six million farming units were identified by the Census of Agriculture. A high proportion of the production of most farm commodities came from relatively small farms that were owned or operated by a farmer and his family. The main exceptions were some plantations in the South and some large-scale "specialty crop" units in California.

Over time, the farming units dominating production have become larger and more commercial. Not only have production units grown in size, but many have been integrated with other stages of food and fiber marketing. Currently, many very large production units can only be described as industrialized units which bear little resemblance to firms producing the same product 40 years ago. Examples are today's cattle feedlots with over 20,000-head capacity or egg factories with one million birds. These units not only are much larger, in terms of production, but also use much more capital and less labor and land than their predecessors.

Note the changes in the concentration of agricultural production in Table 1.1 using data derived from the Census of Agriculture. In 1929, of those farms that were in Census Class 2 or larger, 1.2 percent of about six million census farms produced 14.9 percent of the output (adjusted to 1964 farm prices). However, it took all farms with product sales of $5,000 or more (Census Class 4 and larger) to provide 45.2 percent of the total output. Conversely, units producing under $5,000 of output still provided 54.8 percent of total farm sales. In very sharp contrast, in 1964 only 12.7 percent (those farms with over $20,000 sales) of the 3.16 million census commercial farms produced 64.4 percent of the value of total farm sales. It is estimated that 20.2 percent produced 75 percent of the sales value in 1970. Smaller units, 87.3 percent of the total, produced only 35.6 percent of total output.

Table 1.1 — Comparison of the Concentration of Number of Farms and Value of Products Sold, 1929 (Adjusted to 1964 Prices), 1964, 1969, and 1970[a]

1964 census class	Percent of total number			Percent of total sales		
	1929 adj.	1964	1969	1929 adj.	1964	1970
1, 2	1.2	12.7	20.2	14.9	64.4	75.[illegible]
3	2.7	14.8	14.5	12.4	19.2	14.[illegible]
4	7.9	16.0	14.3	17.9	10.6	5.[illegible]
5	23.8	14.1	16.7	30.0	4.7	1.[illegible]
6	64.4	42.5	34.3	24.8	1.1	2.[illegible]

[a] Calculations for 1929, 1964, and 1969 by Leonard R. Kyle based on U.S. Census of Agriculture. Data for 1970 calculated from projections by Rex F. Daley, J. A. Dempey, and C. W. Cobb. *Farm Numbers and Size in the Future*. Pp. 314-332 in Size, Structure, and Future of Farms. Ed. by A. Gordon Ball and Earl D. Heady. Iowa State Univ. Press. 1972.

The concentration of production on the larger units is not uniform by type of farm or by area. In 1964 large-scale units with over $100,000 in sales, produced over 68 percent of the output in the States of California, Arizona, and Florida, while New Mexico and Colorado followed with 39 and 42 percent. In the Midwest and Northeast, large scale units were not so important (Fig. 1).

The size distribution of farms has both a historical background and a relationship to the type of crops and livestock products produced. Even in 1929, 20 percent of the production on vegetable and fruit and nut farms came from units that by current output standards would be in Census Class 1 farms (those with $40,000 or more in sales). But, by 1964, only 3,577 vegetable farms provided 81 percent of the production (Tables 1.2 and 1.3), and about 7,334 units producing other field crops (including potatoes, sugar beets, etc.) had over 74 percent of the output of farms of this type. It is expected that 1969 census data will show further concentration.[3]

The changes that have occurred for different types of farms, as classified by the census, are given in Tables 1.2 and 1.3. To date, tobacco, dairy, and cash-grain farms have shown less concentration in production. For example, in 1964, 23.9 percent of the total production of cash-grain farms came from Class 1 units. The figure for dairy farms is similar, but it is less for tobacco farms. Although the trend to concentration of production on the larger farms has not progressed as rapidly on cash-grain, dairy, and tobacco farms as it has on most other farms, it has progressed substantially.

A different data series shows the lack of concentration of beef cow-calf operations *(5)*. The average number of beef cows per farm in the United States was 26.3 in 1964. Even though some ranches are large-scale units with over 1,000 cows and it is easy to find herds with over 5,000 cows, the dominant unit is very small. In the eastern half of the country, beef-cow herds average less than 20 cows. These are supplementary enterprises developed to utilize otherwise wasted resources on crop-livestock farms or part-time farms.

The concentration in fed beef production is a sharp contrast to beef-calf production. On January 1, 1972, 58 percent of the fed cattle came from only 2,204 feedlots with a capacity of over 1,000 head. The other

[3] Data by type of farm should be available in 1973.

Marketing by farms with $100,000 or more in gross sales as percentage of total marketing of all farms for the 48 contiguous states (1964 census). (Fig. 1)

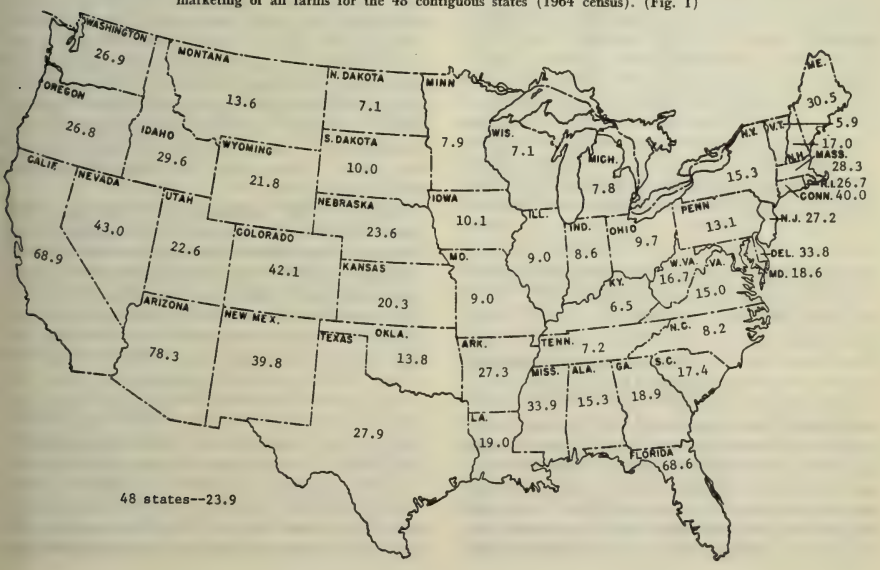

Table 1.2 — Number of Large Farm Firms by U.S. Farm Census Type and Size, 1929, 1959, and 1964

Type of farm	1929 large size[a]	1959 Class 1[b]	1964 Class 1[b]
Vegetable	785	2,730	3,577
Other field crop	699	4,011	7,334
Poultry	225	11,151	19,249
Fruit and nut	1,924	6,547	8,103
Miscellaneous	101	3,830	5,034
Ranch	1,829	6,757	5,921
Cotton	441	13,171	13,033
Livestock	453	29,439	35,116
General	50	4,775	8,783
Cash grain	486	10,828	19,301
Dairy	882	8,538	15,463
Tobacco	...	332	1,000
Total	7,875	102,109	141,914

[a] Farms with over $30,000 value of products sold in 1929, which is comparable to $48,600 in 1959 and $48,450 in 1964.
[b] Farms with over $40,000 in gross farm product sales as listed in the U.S. Census of Agriculture.

Table 1.3 — Concentration of Farm Production by U.S. Farm Census Type, Value of Products Sold, and Size, 1929, 1959, and 1964

Type of farm	1929 large size[a]	1959 Class 1[b]	1964 Class 1[b]
	percent of total production		
Vegetable	20.0	73.8	81.4
Other field crop	5.1	55.8	73.7
Poultry	3.3	55.4	67.9
Fruit and nut	19.9	45.1	67.6
Miscellaneous	1.0	62.1	65.4
Ranch	29.2	59.8	64.0
Cotton	1.4	46.8	55.2
Livestock	2.1	33.9	46.8
General	.2	20.7	33.6
Cash grain	1.8	16.7	23.9
Dairy	3.0	15.3	23.4
Tobacco	...	3.9	8.2
Total	5.0	32.8	43.7

[a] Farms with over $30,000 value of products sold in 1929, which is comparable to $48,600 in 1959 and $48,450 in 1964.
[b] Farms with over $40,000 in gross farm product sales as listed in the U.S. Census of Agriculture.

168,843 lots fed the remainder. The trend to large feedlots has been very rapid in recent years.

By 1970, the largest 223,000 farms in the United States (those with sales over $40,000) comprised only 7.6 percent of the 2.9 million total but controlled over 52.5 percent of the production of food and fiber *(9)*. If this trend continues, it is conceivable that within two or three decades 70 to 80 percent of total farm production could be concentrated on about 100,000 farms. Of what type and how large will these units be? What will be the capital investment required? How will farm commodities be marketed and prices established? Who will really control these production units? What farming opportunities will remain for the other (perhaps 1,500,000) less-than-commercial farms? These are questions that are uppermost in the minds of many people, particularly those closely allied with farming.

The Changing Nature of Farm Entrepreneurs

With the drastic decrease in the number of farms that dominate the major part of agricultural output, it is important to focus attention on who really owns, controls, and manages the larger units. Are they really bona fide, full-time farmers in the commonly accepted sense of 40 years ago?

Data from the Internal Revenue Service for 1966 (Table 1.4) help increase our understanding of the people involved in farming. About 3 million individuals reported farm income in 1966. Not all of these individuals were active farmers and not all farmers reported income. So there is some difference in the populations reported in the census and IRS data. Of those individuals reporting farm income to IRS, 90,000, or 3 percent, have been classed as "affluent." To be so classified, they had to have total taxable income of over $25,000 (for other specifications, see footnote to Table 1.4) *(8)*. These individuals were generally associated with larger farms (averaging almost $45,000 in cash farm receipts). Since less than one-third of this was net farm profit, the taxable farm income was considerably less than their average taxable income from nonfarm sources of $42,000. Half of this group reported income from wages averaging over $20,000 and 56 percent reported dividends averaging almost $15,000. Nearly a third of the group was involved in a nonfarm sole proprietorship or a partnership, and the average income from each of these sources was about $18,500 and $14,500 respectively.

Another 441,000 individuals, or 14 percent, were classed as "well off," usually having taxable incomes from $10,000 to $25,000. They had cash farm receipts averaging $19,240. Their average taxable off-farm income was $9,660, which was also higher than their taxable net farm profits. Perhaps about half of this group could realistically be classed as bona fide, full-time farmers without significant off-farm income.

The 531,000 individuals represented by these two groups apparently constitute most of the unincorporated entrepreneurs for the U.S. Census Class I and II farms. In 1970 U.S. Department of Agriculture estimated 597,000 Class I and II farms with over $20,000 in sales. *Yet, their dependence on farming as a source of income to pay for family living and to retire debts was overshadowed by their income from off-farm sources.* In fact, many strategically used their farming operations

Table 1.4 — Farm and Off-Farm Income Reported by Individuals to the Internal Revenue Service in 1966

Class	Average adjusted gross	Number	Percent of total	Percent with farm profits	Average farm receipts[a]	Off-farm income: Percent with wages	Off-farm income: Percent with dividends	Off-farm income: Average taxable income (all nonfarm sources)
Affluent	$41,590	90,000	3	39	$44,950	50	56	$42,242
Well off	12,940	441,000	14	61	19,240	67	23	9,755
Upper middle	6,340	1,088,000	36	55	10,040	72	9	5,019
Lower middle	3,320	751,000	24	69	8,590	54	7	2,062
Poor	1,260	673,000	23	87	5,460	25	4	516
All individuals	$ 6,460	3,043,000	100	66	$11,030	56	11	$ 5,102

[a] Usually less than one-third of farm receipts are net farm profit and classed as taxable income.
Source: *(8)*. Reinsell classified individuals into five groups used in farm profits or losses and taxable income from all sources. The "wealthy" individuals had taxable income from all sources of over $25,000 and farm profits or losses more than $10,000. Those with farm losses over $10,000 could have any amount of taxable income from all sources. "Well off" individuals had income from all sources from $10,000 to $24,999 unless losses were in the $5,000 to $9,999 bracket.

to reduce their income tax liabilities and enhance their accumulation of wealth. Only 39 percent of the "affluent" group and 61 percent of the "well off" group reported farm profits to the Internal Revenue Service. Yet, 87 percent of the 673,000 "poor" individuals with much smaller farm operations reported farm profits.

Thus, Reinsel's reporting of IRS data (Table 1.4) provides a new dimension to the gradual demise of a strictly farming class of rural people. Sixty percent of the total, or more than 1.8 million individuals of upper-middle and lower-middle affluence reporting farm income in 1966 (groups C and D, Table 1.4), had modest farm operations averaging only about $10,000 and $8,600 in farm receipts respectively. These two groups averaged over $5,000 and $2,000 respectively in taxable income from nonfarm sources. And more than half of the individuals in these groups had wages from off-farm work that materially contributed to their total adjusted gross income for tax purposes.

In a real sense persons in the C and D groups are classed as farmers because they live on and often operate small noncommercial farms. The 673,000 individuals classed as poor may even more appropriately deserve a farmer classification than the upper-middle and lower-middle groups. They had very little income from nonfarm sources even though their farming operations were very small and their income was, in most cases, well below the poverty level.

Corporate Farms

Approximately 10,700 of the Census Class 1-4 farm units were estimated to be controlled by corporations in 1967 *(2)*. Though this estimate is rough, it lends some perspective to the total incidence of corporate farms. Some of these, perhaps 2,500, are very large, involve various types of nonfarm business ventures, and cannot be classed as family units. Though this number is relatively small, it should be remembered that in 1971 only 111 of the largest nonfarm industrial corporations, each with assets over $1 billion, controlled about 51 percent of the assets used in manufacturing in the United States *(4)*.

California's corporate farms warrant special mention because of the large number of units *(2)*. Many of these are vegetable, fruit, nut, and cotton farms. The average acres operated by corporate farms was 3,000 for wholly owned units, about 1,500 for rented operations, and 5,800 for part-owned, part-rented situations. Less than 1,700 farm corporations in 1968 had about 25 percent of total production from California's farms. Among these farm corporations, over 80 percent were involved in no activity except farming. This is a higher percentage than for any other state except Montana.

It is difficult to document the increased involvement of large publicly held corporations in agricultural production, but many believe this is occurring. The legislatures of several states have recently considered laws to restrict the involvement of corporations in agriculture because of intensive concerns of farmers. North Dakota has had a law that prohibits corporations from owning or operating farmland since 1932. However, nationwide no very effective curbs have yet been implemented.

Forward Contracting and Integrated Production

Some farmers fear the gradual increase of agricultural output marketed through forward contracts or integrated production operations. Others, such as milk producers and sugar beet growers, often do not realize that their output is marketed under a forward contract and may have been for many years. Contract and vertically integrated production increased slightly in the 10 years

between 1960 and 1970 from an estimated 19 to 22 percent of total output *(7)*. This represents considerable variation by crop and type of livestock product. Currently an estimated 36.2 percent of the livestock and livestock products and only 14.3 percent of the crops are produced under contracts or integration. However, 100 percent of the sugar beets and sugar cane, 98 percent of the fluid milk, and 97 percent of the broilers are produced under prior commitments (Table 1.5). For sugar and milk, federal laws and regulations are very much a part of the system.

The methods used to contract for the sale of fluid milk are considered satisfactory by most dairy farmers, including the small ones. Many farmers, however, deplore the lack of freedom which exists for the farmer who produces broilers under contract. At least a part of the difference results from dairy producer cooperatives controlling the contractual arrangements for milk while large feed companies or other nonfarm firms control the contracting for broiler production. Thus, producers are considered to have a more effective voice, and greater entrepreneurial input, in setting the contract terms for milk than for broilers. As farm cooperatives get larger and more powerful, farmer members are concerned about their relationship to the marketing decisions made by the leaders.

In the last 10 years a considerable increase has taken place in prearranging the disposition of processing vegetables, fed cattle, eggs, and turkeys. The only farm commodities that showed a trend toward reduced contract production were dry beans and peas. In these cases, once production procedures were adequately standardized, little economic incentive remained for continued contracting. Wheat and feed grains are examples of farm commodities where little economic incentive for vertical integration or forward contracting has arisen to date.

Table 1.5 — Estimated Percentage of Output Produced Under Forward Contracts and Vertical Integration in 1960 and 1970

Commodity	1960	1970
Feed grains	.5	.6
Hay and forage	.3	.3
Food grains	3.0	2.5
Fresh vegetables	45.0	51.0
Processing vegetables	75.0	95.0
Dry beans and peas	36.0	2.0
Potatoes and sweetpotatoes	70.0	70.0
Citrus fruits	80.0	85.0
Other fruits and nuts	35.0	40.0
Sugar beets	100.0	100.0
Sugar cane	100.0	100.0
Other sugar crops	7.0	7.0
Cotton	8.0	12.0
Tobacco	4.0	4.0
Oil-bearing crops	1.4	1.5
Seed crops	80.3	80.5
Miscellaneous crops	6.0	6.0
Total crops[a]	**12.9**	**14.3**
Fed cattle	13.0	22.0
Sheep and lambs	4.0	10.0
Hogs	1.4	2.0
Fluid-grade milk	98.0	98.0
Manufacturing-grade milk	27.0	26.0
Eggs	15.0	40.0
Broilers	98.0	97.0
Turkeys	34.0	54.0
Miscellaneous	4.0	4.0
Total livestock[a]	**30.4**	**36.2**

[a] Individual items weighted by relative values.

Industrialization of Our Food and Fiber Systems

The rapid application of science and mechanization to most sectors of farming has been widely recognized. So has the increased incidence of vertical integration and contract production for some farm products. Less well recognized, however, has been (1) the recent industrialization of some sectors of agriculture via conglomerate integration and (2) the shift in emphasis throughout the distribution channel from marketing commodities to marketing food and related services. These developments, although still somewhat limited, have brought into some farming activities the full power of capital, technology, and business enterprise already present in other more highly industrialized sectors of the economy. They involve much more than mere contractual delivery of a farmer's product. The involvement of feed companies in the production of broilers and eggs is a recent example. Two components of this industrialization enumerated by Farrell *(3)* and by others are (1) the enormous expenditures made for product and service development and (2) the proliferation of brand-differentiated, advertised products, which are packaged in a wide range of forms and designed to capture the food dollar of affluent, convenience-seeking consumers.

The old simple concept of food as a staple, basic commodity and of a sovereign consumer with a clearly defined demand for food is being cast aside. Industry seeks to create consumer demand for differentiated products and then to tailor the marketing and production process accordingly. This is a process that has been used effectively in the production and marketing of automobiles, television sets, and numerous other consumer items.

Clearly not all farm products lend themselves to this system of industrialized production and marketing. However, the appearance on the scene of a number of firms interested in selling a line of foods and related services suggests that some farm production units will or could be absorbed into large industrialized units in varying degrees. Current developments in confinement hog raising and sow leasing are causing some observers to predict potentially drastic structural changes in hog production in the future. Changes in product or processing may also influence concentration.

Food Manufacturing and Distribution

Increased concentration in food manufacturing and distribution by large, often highly integrated firms can be expected to further increase the size of farms. This results from the food firms trying to minimize the costs and inconvenience by buying and assembling farm products in the large volume lots that they require and by controlling quality tightly.

The total number of food manufacturing plants has dropped from 42,000 in the early 1950's to fewer than 27,000. In the flour milling industry alone, the number was halved during the 1950's and 1960's, so that now fewer than 540 mills are still in business. In 1965, the 31 largest firms had more than 40 percent of the total milling capacity in the United States.

Plants processing poultry have also declined in number and become larger in size. The number of federally inspected plants fell approximately 15 percent between 1964 and 1970. However, the number of large plants — those processing 30 million or more pounds of poultry a year — about doubled. They now account for nearly 80 percent of the total output of all federally inspected plants.

Merchant food wholesalers have doubled sales per establishment since the early 1950's. The number of establishments decreased only slightly, partly because many have been needed to supply the requirements of the booming institutional food market. However, wholesale functions are more and more being integrated with retailing. Four out of five firms in the supermarket industry have their own central warehouses or else are affiliated with a retailer-owned cooperative or a wholesaler-sponsored voluntary chain.

These firms dominate retail sales. To illustrate, over three-fourths of all grocery store sales are currently rung up in supermarkets (defined as having annual sales of $500,000 and up). Numerically, they increased from over 33,000 in 1960, to over 38,000 last year. The number of "small" grocery stores — those with sales of less than $100,000 — fell sharply. In 1970, only 113,000 remained out of a total of 168,000 in 1960 *(10)*.

Who Benefits From Larger Farms and Improved Technology?

For years farm management economists have debated how large a farm should be to achieve the greatest efficiency. Until recently, the research evidence seemed to favor operations of modest size that could easily be handled by a farmer and his family. The persistent trend to larger units, some of which are very large and still financially successful, is causing a re-evaluation of the potential for large scale and industrialized units.

Conclusions from recent research support the view that units as large as 5,000 acres can be successful in the Corn Belt, but that well-managed two-man cash-grain units of 1,000 to 1,200 acres will be competitive for some time to come. Two-man livestock farms with 600 to 800 acres will also have considerable staying power *(6)*. Yet, how many farms in the Corn Belt are this large? How many farmers in the Corn Belt can achieve a goal of even 600 crop acres in the near future? Nearly half of the current units would need to vanish from crop production for this to happen. With the potential for combining farm and off-farm activities, many part-income units will remain competitive and a wide range in size and organization of farm units can be expected for a long time.

The prospects for the concentration of most of our agricultural output on from 100,000 to 200,000 commercial farm units depend on the continued adoption of new technology. Since 1930, the public appropriations for the purpose of developing new knowledge and extending it free of direct charge to farmers have almost doubled in each decade. In recent years, private businesses have also added large investments in the research and development of the inputs needed for agricultural production or in related processing, marketing, and distribution. The investments in and the flow of new technology to agriculture are expected to continue as farm labor and productive cropland increase in economic scarcity.

The real cost of food to the American consumer has declined by half or more since 1929. This has occurred because wage rates in nonfarm industries have quadrupled between 1929 and 1970 while the prices of farm products less than doubled during the same period. The explanation for this is the competitive nature of the agricultural sector which rests firmly on technological advance *(1)*.

A big concern about the future adoption of new technology apparently relates to the potential competition among the early adopters, many of whom will operate large-scale units. Since the early adopters of technology are usually the people or firms who obtain the greatest benefits and the length of time for the adoption of new technology is decreasing, competition among early adopters may speed up. If the new technology fails, there may be a survival problem for early adopters who are not well financed. Large-scale conglomerate corporations would probably have more ability to withstand such losses. Also, wealthy farm entrepreneurs with ample off-farm income can overcome losses better than a farmer who is entirely dependent on farm income.

If large agribusiness conglomerates gain control of the production and marketing of a substantial portion of the food supply, it is assumed they will use techniques that

are far from perfectly competitive. In fact, they may operate more like the large corporations that now control much of the industrial wealth in the United States. With extensive control, these units would be able to regulate prices and boost profits unless they are restrained by the actions of government.

Government Programs

Government policies have affected U.S. agricultural development since the early days of the nation. In the 18th and 19th centuries government policy for agriculture centered around the acquisition and distribution of land in the public domain. Land grants to railroads stimulated railroad building and facilitated the transportation of agricultural products. The Homestead Act opened a broad expanse of agricultural land to people with a minimum of capital. It also was a major determinant of farm size and organization for a long period. By the end of the 19th century, policies gradually shifted to those aimed at conservation of land and other natural resources, improving the availability of credit for farmers and building institutions for agricultural education and research. After World War I, political action to assist farmers through implementation of price supports began to emerge as the major farm policy thrust. The Agricultural Marketing Act of 1929 created the Federal Farm Board and the first direct efforts of government to influence farm prices. The Federal Farm Board's efforts did not, however, prove successful. Failure can be attributed to several factors including the general depression of the 1930's and a lack of effective methods to limit production in line with effective demand. But the experience gained through this effort stimulated efforts to write a new farm law.

The Agricultural Adjustment Act of 1933 provided for production adjustment through limiting production. After it was declared unconstitutional, it was replaced by the Soil Conservation and Domestic Allotment Act of 1936 and then the Agricultural Adjustment Act of 1938. Amendments and additions to these acts have been made generally every three to five years. As a result, agriculture has been under some type of farm commodity income support program since the 1930's.

The budget for the U.S. Department of Agriculture in recent years has included programs for the benefit of both farmers and consumers. The largest single portion of the budget has been allocated to income support programs. In addition, programs in credit, conservation, research, and services and Public Law 480 provide direct or indirect benefits to farmers (Table 1.6).

Since 1960, direct income payments have risen along with the total federal budget for agriculture. Feed grain, wheat, and cotton program payments in 1970 made up about 89 percent of all government payments to farmers *(9)*. In the 1971 fiscal year, these programs accounted for about 46 percent of the total USDA budget. High expenditures for these programs have resulted in a proportionately high distribution of payments to those states and those producers where feed grains, wheat, and cotton are important and constitute a major part of the agricultural production.

Table 1.6 — U.S. Department of Agriculture Budget for the 1971 Fiscal Year

General purpose	Million dollars	Percent
Income support	3,702.4	46
Credit	670.4	8
Conservation	455.8	6
Research and services	582.9	7
Consumer food services	1,976.9	24
Public Law 480	702.5	9
Total	8,090.9	100

In 1970, direct payments totaled $3.72 billion. In the same year, these payments were equal to 23.7 percent of U.S. realized net farm income.[4] Since some costs were involved, these payments resulted in additional net farm income of something over $3.4 billion. These payments varied largely in proportion to the size of individual farm operations and volume of sales (Table 1.7).

As a result of price support programs that tie benefits directly to farm size, larger farms have received much larger benefits than small farms. For example, in 1970, 7.6 percent of all farms (those with over $40,000 gross sales) received 30.4 percent of all payments.

Effect of Government Programs

Have government programs encouraged formation of larger units? This is a very debatable question. Most programs, whether price support, land retirement, or direct payments, essentially base both performance requirements and rewards (price and income) upon past history for individual units. Also, most programs attempt to perpetuate certain past relationships among tenants and owners as long as tenants remain on the land. They have not protected against loss of access by tenants and, except for sugar crops, have had no protection for wage labor. *Consequently government programs do not of themselves materially alter the previous income relationships among farmers of various types and sizes. Presumably incomes are raised in a more or less uniform percentage for all farms.*

There are, of course, exceptions. At various times smaller farms have been given a relative advantage

[4] If payments are excluded as part of realized net income then they are equal to 30 percent of the realized net.

Table 1.7 — U.S. Farm Income Distribution by Sales Classes, 1970

	Farms with sales of						All farms
	$40,000 and more	$20,000 to 39,999	$10,000 to 19,999	$5,000 to 9,999	$2,500 to 4,999	Less than $2,500	
Number of farms (thousands)	223	374	513	370	260	1,184	2,924
Distribution (percent)	7.6	12.8	17.5	12.7	8.9	40.5	100
Cash receipts (percent distribution)	52.5	21.4	15.6	5.8	2.1	2.6	100
Average realized gross income per farm	$126,812	$32,096	$17,450	$9,324	$5,199	$2,148	$19,350
Average realized net income per farm[a]	$ 25,664	$ 9,962	$ 6,208	$3,492	$2,049	$1,059	$ 5,374
Average off-farm income per farm operator family	$ 5,803	$ 3,503	$ 3,452	$4,984	$5,465	$7,954	$ 5,833
Average direct government payments per farm	$ 5,067	$ 2,527	$ 1,715	$ 916	$ 592	$ 227	$ 1,271
Direct government payments (percent distribution)	30.4	25.5	23.7	9.1	4.1	7.2	100

[a] Includes government payments.
Source: *(9)*.

through minimum allotments or upward factoring of payment rates and more liberal rules for land retirement. On the other hand, in the 1970 Act most of these concessions, except for cotton farms, were eliminated. Instead, a limit of $55,000 was placed on payments that large farms could receive. This limit has, however, generally been regarded as ineffective.

At the least then, history-based programs were not intended to, nor did they provide a major differential income advantage to smaller farms. That their net effect has been to give a positive net long-run differential advantage to larger farms is an often advanced conclusion. The evidence appears to support it. *Several important reasons for believing that price and income programs speed the trend to concentrated holdings are (1) wealthy investors, either farm or off-farm, presumably are highly responsive to protected income, (2) the stability of income promised by programs may provide improved access to big capital markets, and (3) small farmers have difficulty accumulating capital for expansion even with commodity price supports.*

A second line of reasoning is an almost ironic counterpart of the previous ones. Part of the staying power of the traditional farmer has been his willingness to accept a substandard income. As incomes are lifted to near equivalent levels with nonfarmers by government programs, farmers lose the protection they had with lower earnings.

Some side effects may also favor larger farms. If larger farms are undermanned and underequipped, land-retirement programs are very attractive. If smaller full-time farms are overcapitalized, they find land retirement onerous. Also, the nonfarmer who can "farm" the program through land ownership finds land retirement more attractive than the full-time operating farmer who cannot buy or rent more land.

A number of factors have been responsible for increases in the number of large farms and it is difficult to specify the extent to which government programs have been a contributing factor. *Overall, however, with the exception of tobacco farms and perhaps other limited situations, the impact of government payments has been to help finance the growth to large operations for many farmers. At the same time programs have provided income stability and adjustment assistance to some farmers who have chosen not to increase the size of their farm operations or who were unable to do so.*

Commercial Farms in Perspective

There is a tendency for some people to think in terms of commercial farms as being all there is to farming. Yet, in reality there are approximately six units with under $20,000 in sales for every unit with over $20,000 in sales.

Each year there are more rural residents who are farming and also working full time off the farm. This is particularly true near metropolitan industrial areas. These people prefer to live in a rural area and engage in small agricultural operations without any intention of becoming full-time farmers. Also, there are many small farmers who are semiretired and use the farm to keep busy. USDA estimates show that two out of three American farmers receive over half of their annual income from off-farm sources. The off-farm income of farm operators doubled in a decade, rising from $8.5 billion in 1960 to $17 billion in 1970, when it exceeded net farm income for the first time *(9)*.

Very sizable land resources will continue to be used for noncommercial farms regardless of what happens to the concentration in commercial agriculture. Much of the production from these units will be for home consumption or local use, but as long as markets are accessible, some production will also enter into the industrialized food system.

Very few logical reasons can be used to predict that the forces now in motion in agriculture will subside in the near future unless major changes are made. In fact, a few

scientists believe that new technology in farming will be adopted at an even faster rate in the next two decades. Most of these new developments, like many in the past, will result in larger farms and require more capital and more sophisticated management. As all of these forces converge, it will become even more difficult for an individual entrepreneur to become established and compete successfully in *commercial* farming. The managerial skills and equity capital requirements will be too great.

Some family-owned partnerships and corporations and a limited number of sole proprietorships will be able to control the resources needed to organize an efficient farm business operation for some time to come. However, the problems of settling estates where large amounts of capital and high estate taxes are involved and the inability of some families to work together in solving the intergeneration transfer of farm units will gradually work to the advantage of larger-scale, less family-oriented, entrepreneurial control of agricultural output. The forces imposed from the processing, marketing, and distribution sector will also enhance this trend. This is particularly true for those farm commodities that can become an important component of an integrated food production and market service system.

The future for many part-time and part-income farms with sales under $20,000 will remain good as long as their production has access to markets that are reasonably equitable. Stability in their nonfarm income will be very important to them. So the diversity in the size and structure of operating farm units of all sizes will continue for a long time.

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2. ISSUES IN CONCENTRATION VERSUS DISPERSION

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Questions affecting a policy choice between a concentrated versus dispersed farming system are not new. Criteria for the choice begin with the ideals, values, and goals of all who are affected — farm operators, tenants and laborers, marketers, and consumers. The authors test the two systems against these criteria while reminding that other, intermediate systems also are possible. Further, any preference for dispersed farming does not exonerate that system from its faults or excuse it from all need to change. Overall, purely economic factors in the policy choice are not more important than "our ideas of the kind of world we want to live in."

The ultimate value of a free economy is not production, but freedom, and freedom comes not at a profit, but a cost.

— *Henry Wallich*

Had it been merely the liberal spirit alone which inspired the American farmer to become capitalistically oriented ... the difficulties he encountered would have been greater than they were. But where land was abundant and the voyage to the New World itself a claim to independence, the spirit which repudiated peasantry and tenantry flourished with remarkable ease.

— *Louis Hartz*

EACH GENERATION exaggerates its own place in history. It sees its accomplishments as original, its problems as unusual. United States agriculture today is no exception. It overexalts its achievements and overrebukes itself for its deficiencies. It overstates its problems as new and unprecedented.

A pressing policy problem for the foreseeable future is how farm production and marketing is to be organized and who is going to control it. Thrust upon us after 40 years of preoccupation with acreage controls and price supports, this organizational issue appears strange and new. It is not new at all; it is ancient.

From the time primitive man divided the tasks in providing food and skins until the day of modern commercial farming, the organizational system has been a subject of deep importance to farmers. Also, it is important to those associated with farm production or marketing, and to those dependent on it for sustenance — that is, to everyone.

Historically farming has been organized in many ways and it is organized differently in various parts of the world today. Farms range from the minifundia to the semifeudal estates in Latin America and from the scattered hereditary private plots of western Europe to large corporate farms of the western United States and the large state farms of the Soviet Union.

In most of the United States a single kind of organizational system has prevailed. Best known as the family farm, it is more accurately designated as a small-unit proprietorship. The term used in this publication is a "dispersed" or traditional system of farm production and marketing, which contrasts with its extreme opposite, a "concentrated" system. By using the general term of dispersed farming, we avoid being bound to a particular system of the past or present.

The policy question is not whether things will be kept just as they are; it is neither desirable nor possible to do so. Rather the basic question is whether some version of a dispersed farm production and marketing organization is to prevail or whether the control of U.S. farm production and marketing will be concentrated in a relatively small number of large firms. A key word is *control.* It has little relation to the form or location of operating units. In a dispersed farming system decision-making power is dispersed. In a concentrated system the control rests in a few hands. Also, the issue involves the degree of dispersion or concentration that will develop.

The opening chapter sketched some current developments in U.S. farming. This chapter will outline some of the criteria by which policy should be considered, name some of the causal forces that account for the trends, and list a few alternatives and some consequences to various segments of society.

The criteria particularly concern the values and goals that ought to enter into policy decisions of such vital importance.

Values and Goals

First we consider the desires, the ideals, the values, and the goals of persons affected by the future organization of farm production and marketing. What indeed are the aspirations of farmers? This includes not only the owner-operators, but also the tenants and the wage workers. In addition, what do suppliers and marketers expect? What does the consuming public ask? Is there any common ground among the groups named above? Do all hold the same values and share similar goals? Although unanimity is neither necessary nor possible, a consensus must exist.

Operating Farmers

Attitudes and aspirations of operating farmers, whether part or full owners, have been pulse-counted often *(1, 3, 4, 5, 6, 7)*. The findings are mixed; not only do individual farmers disagree but many persons are inconsistent in their viewpoints.

The following points probably approximate the findings of most farmer-attitude studies.

- Farmers eagerly seek new technology or are technologically progressive. No longer are most farmers hidebound as to practices in production.
- Farmers are willing to go into debt. The older intense resistance to indebtedness has waned. However, this has not extended to acceptance of permanent heavy indebtedness on land. Farmers aspire to a sizable equity in land. This has become harder to achieve.
- Farmers are of mixed mind about assuming high risk versus entering into either contractual arrangements or governmental programs to reduce uncertainty. Generally, however, as farming risks increase, farmers are more willing to accept measures to reduce them.
- The vast majority of farmers declare they prefer to remain independent proprietors buying and selling in the open market, rather than enter into production contracts. This has not stopped the steady growth of contracting in various products.
- In principle farmers favor, or at least accept, the benefits of group action, as in cooperatives or bargaining. On the other hand, they are reluctant to become involved in it. This contradiction is reported by several studies showing that farmers approve collective action in marketing and pricing but are unwilling individually to join in it.
- Farmers want financial security for themselves, particularly for their retirement years, but hesitate to grant equivalent protections to hired farm workers, as by social security, unemployment insurance, workmen's compensation, or unionization. Farmers tend to take a paternalistic view toward hired workers.
- Farmers have a genuine love of the land, a respect for it, and a desire to protect and preserve it. This attitude is not mercenary; it has roots that are almost religious. It extends to an acceptance of measures relating to what is now called "ecology," which includes the older idea of conservation but extends beyond it to environmental protection and preservation.
- Farmers' attitudes toward earning an acceptable income, to which they of course give much emphasis, may be put in terms of their favoring "commutative justice" while objecting to the principle of "distributive justice." These terms describe two different concepts of social justice that are derived from the ancient Greeks. Commutative justice refers to equality in private relationships. Distributive justice calls for more direct action to share wealth and income. It justifies policies to give direct help to persons suffering low incomes. Farmers generally accept the principle of distributive justice only for handicapped persons, the elderly, and similar disadvantaged groups and others with whom they are personally acquainted or can personally identify.

Among examples of commutative justice, farmers have supported measures to bring honesty and fair trading in marketing, and even to seek price parity for farm products. They have hesitated to accept income redistribution through direct treasury payments, a form of distributive justice. When direct payments gained wider use in farm programs they were made more acceptable by cloaking them under the concept of land rental, which classifies as commutative justice. In reality, only a portion of direct payments pays for voluntary retirement of land and thereby conforms to commutative justice. The remainder is income supplement and fits the idea of distributive justice.

Tenants

Traditionally, the farm tenant has been regarded as a potential owner trying to accumulate enough capital to climb the agricultural ladder. As land becomes scarcer and more costly, the ladder becomes harder to climb.

Little evidence is available as to tenants' hopes and plans. Some want to buy land for a base of operations. Others find it more promising to put their funds into operating capital and into education for their children as they till ever larger acreages rented from as many as five or six or even more landlords.

The relationships with landlords involving farm program rules, security, income, and level of living are presumably of primary importance to career tenants. With regard to technology, risk, group action, and attitude toward land, tenants probably hold many of the same values as owner-operators.

Hired Farm Workers

Some workers are neighbors or other farmers with few alternatives who are "helping out," but there also is a hired labor class. The hired farm labor group ranges from permanent skilled labor as on large dairy farms to temporary seasonal labor with little attachment to agriculture.

The interests of these hired persons appear to be identical with those of industrial labor: wage rates, working conditions, stability of employment, and fringe benefits including workmen's compensation, unemployment compensation, health insurance, and social security. More farm workers are turning toward the union form of organization as a vehicle to express and press their wishes.

Marketers

Firms that buy from farmers are usually margin-takers and are affected more by the volume of business done than by the price level of farm products. They want the volume large. Marketers have frequently opposed programs by which farmers might limit their output.

Market firms are concerned not only with the price and volume of farm products available to them but also with the dependability of timing and quality — the more so as they become part of the "industrialization" of the food and fiber industry referred to in Chapter 1.

Input Suppliers

Suppliers of inputs, like market firms, are usually margin-takers and therefore emphasize a large volume of business. In contrast to marketers, however, the input suppliers usually show more concern for farmers' incomes because they know that farmers buy more fertilizer, tractors, and other production inputs when their incomes are favorable.

Input suppliers, particularly of products such as feed and fertilizer, find it advantageous to establish secure outlets. They resist both sharp fluctuations in volume and a high cost of selling. These objectives explain why they sometimes seek contractual outlets.

Agribusiness firms located in rural areas, both marketers and suppliers, appear to feel a closer tie to farm affairs than do those farther removed.

The Consuming Public

The public at large, which both consumes farm products and finances farm programs through its taxes, has much at stake. *U.S. consumers have recently declared their wishes with some emphasis. Wholesome, nutritious, safe food at a moderately low cost seems to be their major objective.*

Nevertheless, it is unfair to charge consumers with purely sectarian or selfish attitudes. They frequently express concern for long-term goals such as conservation of land, and respect farmers' aspirations for both acceptable income and proprietary status. Consumer protests over high food prices have been directed almost exclusively toward processors and retailers and not toward farmers. Farmers enjoy considerable good will among the consuming public.

Dispersion Versus Concentration

Features of Dispersed Farming

A dispersed system of farm production and marketing by definition has many proprietary units. On each unit the operator combines in himself two or more economic roles such as laborer, manager, capital supplier, and often a landholder. The proprietary status of farmers in a dispersed system is usually related closely to an open market system. This does not rule out all contractual marketing, but it excludes contractual arrangements that seriously compromise the managerial independence of the farmer.[1]

A dispersed system of farm production and marketing does not as a general rule result in sharply divided economic-social classes for those who work the land, for those who manage it, and for those who own it. This is an important feature.

A dispersed system puts little if any economic power in the hands of each farm or farmer. The farmer can manage his own resources as he sees fit, but he possesses no economic power beyond his farm gate. This is a basic characteristic.

This definition is more general than precise. It does not rule out all absentee landlords and it allows for some hired labor. But it excludes concentrated power. It fits the kind of farming that has prevailed in the North and East and in part, but not all, of the South and West. Typically most landlords have been closely involved with farming, often being retired farmers or farmers' widows.

In the U.S. this kind of farming came into being rather readily. During the first 150 years of our national existence land was abundant. Land disposal policies of the government encouraged small holdings by many people. But the system was also adopted because farmers wanted it and because the public — which always holds a potential veto power over policies for agriculture — either favored it or acquiesced in it. Further adding to dispersed landholding was the wish of many persons to keep a tract of land as a hedge against inflation.

[1] A more complete definition is: "1) Land is privately owned and cultivated. 2) Much of the land is owned by persons within agriculture, rather than by a nonfarm propertied class. 3) The individual proprietor is manager and laborer and provides most or all of his operating capital; he may also own his land. 4) Consistent with 3), the individual proprietorship is comparatively small. 5) The farm buys its supplies and sells its products in market exchange." *(2, pp. 60-61.)*

In no sense is the form or organization of farming purely economic in nature — it has social and political connotations as well. Historically, the men who tilled the soil and tended the herds were sometimes subservient — slaves, bondsmen, and serfs. Even today farmers voice their concerns in the language of their opportunities, occupational status, security, independence, freedom.

The kind of dispersed organizational system that has survived has not done so unaided. On the contrary, it has benefited from much national policy undertaken in its behalf. Measures have included public support for research and dissemination of new technology, an agricultural credit system, a subsidized transportation system, land-use policies, authority for farmers to work together in cooperatives and associations for purchasing, marketing or bargaining purposes, supporting incomes to farmers by means of price support or acreage control programs, and others.

Assessing the effectiveness of these measures is less important than recognizing that a choice of an organizational structure has historically been a public policy matter. It will probably continue to be so in the future.

Features of a Concentrated Agriculture

U.S. farming is being transformed into a new and strange pattern. (See Chapter 1.) Some farms have grown to a size that exceeds the dispersed system for farm production and marketing. More often, large nonfarm interests have moved into ownership or control of farm production. The overall term for a system of farm production and marketing controlled by a relatively few firms is a "concentrated" system.

A concentrated organizational system would typically include both farming operations and firms that formerly supplied inputs or marketed products in a single management complex. Each such complex would establish a "systems approach" to its internal management. This is the opposite of the open market system that in the past generated price signals to guide each stage of farm production and marketing.

Concentration, like dispersion, can take several forms. A concentrated organizational system could consist of huge industrial corporate "horizontally structured" farms. Or it could take the form of contractual integration dominated by agribusiness "vertically structured" firms. A concentrated system would leave little room for the proprietary owner-operated farm of the dispersed system. A few such farms might operate in fringe areas, as those near cities that sell directly to small stores or consumers.

Any kind of concentrated farming would differ from a dispersed system — differ for producers, for firms supplying production inputs, for firms marketing and processing products, for rural communities, and for consumers.

Both the corporate-farm and contractual versions of a concentrated farm production and marketing system are described more fully in Chapter 4.

A Range of Choices

Various intermediate systems can be found between dispersed and concentrated systems of farm production and marketing. These depend heavily on some form of group action by farmers or on government programs. The total range of choices — dispersion, concentration, and intermediate — can be classified as follows:

1. Dispersion of control
   a. Open markets
   b. Variations upon open markets
2. Intermediate systems
   a. Group control
      (1) Cooperatives
      (2) Bargaining
   b. Government involvement
      (1) Marketing orders
      (2) Marketing boards
3. Concentrated control
   a. Horizontally structured
   b. Vertically structured

Origin of Pressures for Change

If issues concerning the organizational system for farm production and marketing are as old as the process of getting food from land, why have they suddenly exploded upon the U.S. farm policy scene? Why is the traditional dispersed organizational system changing? There are at least six reasons:

1. The increasing technical complexity of farming. Farming is more complex than before in the knowledge and skills required of each farmer, especially those of a technical nature. It is more complex with regard to the resources, including financing, that must be employed on an economic unit — many of them obtained from industrial sources.

Some critics feel farming will be manned by specialists — one person a technician, another a manager, and several working as laborers — with financing (and risk bearing) provided almost entirely from nonagricultural sources.

Within the traditional dispersed farming system, increased complexity in production has led to shifting to more commodity specialization, to drawing on specialized sources of technical knowledge, to "buying" such knowledge along with purchased inputs, to using cooperatives to help meet financial needs, and to relying on govern

ment programs for protection against price and weather risks. Questions arise as to whether these or other actions can adequately meet the needs that technical complexity brings about.

The other response has been to move toward a new, concentrated organization of farm production and marketing.

2. *The persistent pressure and tendency to take advantage of volume operations.* If net unit margins may be widened through volume discount buying of inputs or volume selling, the incentive to expand volume is very strong. The pressure to increase total net income in this way is widely felt.

This is different from the question of how large a farm should be to achieve highest efficiency. Maximum operating efficiency has generally been reached with modest two- or three-man units. These units can have substantial "staying power" in competition with more concentrated systems if the survival test be confined to operating efficiency.

The higher net incomes from volume output have played a role in the increasing size of dispersed farm operations. If an individual farm is big enough to influence the terms of procuring its inputs including hired labor, or for marketing its products, it can command favorable differentials. For example, access to low-wage labor can make a large farm appear profitable, but this does not prove that it is more efficient than the two- or three-man farm.

Likewise, advantages from large volume are important in the development of industrialized and concentrated systems of farm production for certain enterprises in some regions. Concentrated systems particularly gain where financing and tax advantages are realized by combining farm and nonfarming activities (see item 4 below).

3. *The scarcity of highly productive farmland coupled with growing needs for land for purposes other than farming.* A major effect is to make land ownership attractive as a speculative investment and as a hedge against inflation.

Of the four resources of production, only land is relatively fixed in its supply. Until two generations ago, we had a frontier of unoccupied land. This is no longer true. Even though technology expands the land's productivity, land is scarce and becoming scarcer. It is increasingly difficult to retain a strong foothold on the land resource.

4. *Closely related to land scarcity are the effects of tax laws.* The rules make it relatively easy for nonfarm investors to outbid farmers for land. It is ironic that several of the tax rules were sought by farmers but have been more helpful to nonfarm investors. The Tax Reform Act of 1969 closed a few loopholes and reduced some attractions to nonfarm investors, but by no means ended some of them. (See Chapter 6 for further discussion.)

5. *Minority position of farmers.* Cultivators and herdsmen have never before been so widely outnumbered by others in the economic system. In the U.S., 5 percent of the population lives on farms, 4 percent is gainfully employed in farming, and 3 percent of the Gross National Product is credited to farm production.

Within the food and fiber system, Shaffer *(8)* estimates the efforts and investments of operating farmers contribute only 15 percent of the final retail value of output. The rest goes to suppliers of purchased inputs and to the marketing system.

Their minority status makes it more difficult for farmers to retain their identity in the midst of so big a nonfarm world.

6. *Pressure put upon farmers to become a subsidiary unit in large business organizations that are often built upon merchandising strategy.* This force affecting the organization of farming may be the least familiar, at least to farmers, yet the most powerful. Most of the pressure toward a concentrated farming does not originate internally. It usually comes from outside sources.

Pursuit of power is a driving force in all economies. The center of power has changed from time to time. Once it was in land. Later the economic efficiency of large-scale manufacturing brought power. Now, power is sought more often in the strategies employed in merchandising consumer products. These strategies involve product development, mass advertising, and promotion of brand names.

More and more, the control gained through merchandising is reinforced by extending it backward to access to raw products. This leads to "vertical systems" in production and marketing. It is possible that vertical systems hinging on aggressive merchandising will become more common in processing and retailing of food and that attempts will be made to bring farming operations into the combines.

Concentration Versus Dispersion: Consequences for Producers

The basic question is worth repeating: What difference does it make as to how farm production and marketing is organized? An accompanying question is: What would be the consequences of alternate forms of organization?

Present-day farmers would find their situation vastly changed if a concentrated farm production and marketing system were to prevail throughout the United States. The change would be sharper if corporate farms would take over than if contractual integration were the choice.

The meaning will be made clear by treating the two kinds of concentration separately.

Corporate Farms

A corporation farming system would put almost all land in the hands of giant industrial-type corporations. It should not be confused with family farms that are incorporated.

Such a system, once it became widespread, would dominate all farming. A few small proprietorships would remain and there would be some landholding by persons who earn most of their income in nonfarm occupations. The latter might hold their own against corporate farms, especially if income tax rules continue being favorable to them.

A farming corporation might be confined to a single commodity like cattle ranching or cattle feeding. Or it could include several commodities. The corporation itself would normally own most or all the land, livestock, and facilities.

Former farm operators would find themselves either fitting into a niche in the corporate hierarchy or excluded from farming. A very few might become top farm managers. A larger number, but only a fraction of our present farmers, would move into middle management. All others employed on farms would be either supervisors — foremen, "straw bosses," and such — or skilled and unskilled workers. The vast majority would be of the two latter categories.

A relevant question is whether corporate farming would pattern itself after corporate industry in all respects. It might. Yet farming is subject to some biological limits. This is particularly true of livestock farming.

The Soviet Union, which shifted to a corporate-type farming, found it necessary to establish a complicated system of incentives and rewards in order to encourage farm workers to show greater responsibility toward crops and especially the care of livestock.

In any event, corporate managers would try to encourage a sense of *esprit de corps* among all employees. Employees, on the other hand, would likely sense compatibility of interest with each other. They probably would combine into unions to express those interests.

Whether farm workers' unions in a corporate farming system would be granted the same legal privileges, protections, and prohibitions as now prevail in industrial unions is highly uncertain. But union organization and activity could be expected to follow if farming goes the giant-corporation route.

Contractual Integration

If contractual integration as it now exists in poultry and in the processing of horticultural crops is a model, integrated farming of the future would allow "farmers" to own land and buildings and possibly machinery but would sharply restrict their proprietorial rights.

This is a kind of farming in which some or all of the risk — price risk, production risk, or both — is transferred from farmers to agribusiness firms. Also shifted is much of the right or responsibility of management. The contracting firm generally decides who shall produce the product, how it shall be produced, and how much production shall be allotted to each contractee.

A contractual farm production and marketing system is a hybrid between the traditional "dispersed" system and a corporate "concentrated" structure. It could take many forms. The exact situation that would prevail as to farmers' income, status, and managerial prerogatives would depend on the bargaining relationship between farmers and the agribusiness firms. *If farmers retained enough negotiating strength, the terms of contracts might approximate the values and goals they have long cherished. If they lacked such strength, they would fall short of those objectives.*

To date, neither private nor public services such as market regulations have been applied to contractual negotiations in the same way as to buying and selling products in the market.

Dispersed Farming

If farming remains dispersed among many independent producers, it will retain many of its present strengths and weaknesses. Farmers would have managerial independence but would bear considerable risk and they would be subject to the vagaries of government programs as well as of the market.

Farms probably will get larger and become fewer in number. Rising land costs will deny land ownership to an increasing number of farmers.

Farmers probably will see many of their open markets continue to disappear. Open markets that remain will be subject to increasing pressure for specification production and orderly marketing. Farmers are perplexed as to what steps to take — to re-establish markets, or to turn to cooperatives, bargaining, or other group action.

In all probability, a dispersed agriculture of the future would materially modify its sources of credit, technical knowledge, and perhaps capital inputs.

Concentration Versus Dispersion: Consequences for Input Suppliers and Marketing Firms

A concentrated system of farm production and marketing would eliminate many firms now supplying inputs to farmers or marketing their products. The relatively few who survive would find the quality of competition to be changed drastically from the day of the individual proprietary farmer.

On the other hand, dispersed agriculture would more nearly retain the conventional relationships between farmers and suppliers or farmers and marketers. Not all change is ruled out, however.

Corporate Farms

Corporate farms producing on vast acreages or feeding large numbers of livestock or poultry would probably set up supply or marketing subsidiaries. Less often would the firm buy inputs from, or sell products to, independent companies.

In the most extreme case, independent supply or market firms would simply disappear. Even in the less drastically changed system, where the corporate farm still actually buys inputs or sells products, the practices would be different from those that are now so familiar in much of the country. Supplies would probably be purchased under carefully negotiated longer-term, large-volume contracts. Products would likewise be sold under contractual arrangements entered into by bid-and-offer.

Among present supply and market firms, the ones affected most would be those now located in rural communities. The chances are that corporate farms would do most of their business with large firms in central cities. The smaller businessman now serving the independent farmer would probably find himself displaced.

Contractual Integration

In a contractually integrated farming system, input supply or market firms would, by definition, be contractually linked with farming operations. They would usually be the most important part of the combined undertaking. There is no universal pattern as to whether the supplier or the marketer would dominate. However, in view of the growing emphasis on merchandising, it is likely that market firms will gain the ascendancy. Suppliers will often be brought into the vertical complex in a subordinate role.

In general, agribusiness firms now in business have little choice between the contractual or corporate farm variety of a concentrated agriculture. Most of the smaller firms would vanish in either case. However, the survivors would probably have more stability and power under a contractual than under a corporate farming system.

Dispersed Farming

If farming remains dispersed, the number of farmers will continue to decrease. The larger commercial farmers will seek the advantages of volume purchases and some might engage in joint selling. Many others would continue to buy and sell independently. The total volume of business that farmers conduct with suppliers and market firms would be greater than now.

Even a dispersed farm production and marketing system would not keep all present supply houses or marketing firms alive. Attrition among those firms will continue, particularly in more remote communities. Nevertheless, the outcome would be substantially more favorable toward those firms than if all U.S. farming were to be concentrated in a few hands.

Concentration Versus Dispersion: Consequences for Consumers

Less is known about the effects of a concentrated versus a dispersed farming system upon consumers than upon any other affected group.

Advocates of concentration claim savings in cost of producing farm products. They promise that savings would be passed forward to consumers. Spokesmen for a dispersed agricultural organization system are skeptical.

Differences in food costs would probably be minor. A concentrated system may bring some economies but it may also have some added costs, as in management or possibly in hired labor. Spokesmen for a dispersed agricultural system point out the performance of traditional proprietary agriculture is not bad and that agriculture has adopted new technology and provided an abundant supply of high-quality food at reasonable prices.

Economies of Size in Production

Farming offers no great operating efficiency from large-size units. Scale economy in crop production is handicapped by space and distance — there are cost disadvantages in farming acreages located far from headquarters. Cost advantages for large-scale livestock and poultry production are partly offset by incidence of disease. The problems have been handled better in poultry and in cattle feeding than in hog production.

Corporate farming requires a sizable administrative staff. It leads to bureaucratic organization and the inefficiencies that accompany bureaucracy. Furthermore, if low wages have previously made some large farms look good, unionized labor in corporate farming would reverse that situation quickly.

Economies of Size in Merchandising

If farming were to become so highly concentrated that production and marketing of some farm commodities would be confined to a few firms, any economies of size in production would be partly or wholly denied to the consumer.

If production efficiency is to benefit the consumer, the marketing and merchandising system must itself be efficient and competitive. Our present farm economy serves

consumers reasonably well because most of its products move through a competitive marketing system in which price competition is keen and promotion and merchandising costs are modest.

In a concentrated farming, costly merchandising and promotional techniques might offset production efficiencies. If that were to happen it might be necessary to resort to governmental regulation.

Concentration Versus Dispersion: Consequences for Income Distribution

A summary measure of the advantages or disadvantages of a new organizational structure — or for that matter the old structure — is its effect upon distribution of wealth and income.

Would a concentrated system of farm production and marketing improve the opportunities and the incomes of persons who now earn inadequate incomes from farming?

Short-Term Adjustments

If farm production were changed over to a concentrated form, the first effect would be to distribute the income of farmers more inequitably than before. The conversion process would exact a price.

The initial change would improve the incomes of a select few farm operators who moved into high administrative or middle management posts, or became skilled technicians. But it would disrupt the lives of many farmers who would be displaced. Evidence is that many displaced farmers are not absorbed readily into other employment. Even though they may not have earned high incomes in proprietary agriculture, on the average they would not improve their situation following voluntary or involuntary evacuation.

A change in the cost structure would occur as a concentrated farming system developed. The costs that are now fixed for the existing farms would become variable costs for the new firms.

Longer Prospects

Adjustments will be made over time. What will happen to distribution of income? Will differences be widened or narrowed?

To shift from any established system to a new one always imposes a heavy monetary and psychic cost on the persons directly involved. Past adjustments in farming have imposed a cost. If farming were to be wholly restructured, the pains of the past would be repeated and perhaps made more piercing.

Traditional farming has had its successful and unsuccessful farmers as measured by income and capital accumulation. Findings of the President's Commission on Rural Poverty and other inquiries have forcefully pointed out that farming has its own very large sector of poverty.

It is difficult to forecast the distribution of income in a concentrated farming system because distribution is concerned with *people* whereas income is concerned with return to individual *factors of production*. That is, income is received for land, for labor, for capital, and for management.

Traditionally the farmer has received income from two, three, or four factors of production. The differences in the income individual farmers have earned from farming are accounted for by (a) the rate of return generally prevailing for each factor, and (b) the amount and quality of each factor each farmer contributed or possessed. A farm operator owning a large acreage of land debt-free has a considerably larger income, as a rule, than a farmer who owns little land and provides mostly labor. Likewise, in concentrated farming the distribution of income would be determined by the two separate considerations. However, most "farmers" would get income from one or at most two factors rather than from all four.

In any transition to fewer owners of land there will be differential income impacts. The owners of average- and above-average-quality land will benefit as the price of land is bid up. In marginal farming areas there will be little interest in purchases for farming purposes and present owners may suffer unless there is an alternate use for the land.

Land Income and Distribution

As just noted, a basic feature of a concentrated farming would be that, to a large extent, it would separate the possession of the four factors of production. Land and much of the physical capital would generally be owned by stockholders of corporations. Management would be in the hands of professional managers. Labor would be performed by salaried employees in the case of corporate farms and by contractual farmers in agribusiness integration.

This feature of a concentrated farming would tend to widen the distribution of income among individuals in it. This is likely because the return to ownership of land would go to a separate class of the population in contrast with the present system in which return to land is primarily received by operating farmers and becomes a part of their total income from farming. Even much of the land rent paid to landlords has gone to ex-farmers or their families, and not to a separate, permanent landholding class.

As mentioned earlier, land scarcity in our nation dates from only a couple of generations ago. Now that land is becoming scarce, it is important to national policy who i

to own it and receive the income from it. Combining ownership of land and labor in the operating farmer has been one of the key characteristics of our dispersed agriculture. A corporate or contractual agriculture dividing ownership of land and labor would concentrate the income received from land ownership. Inequity of income from land has been a source of social unrest through past centuries and could prove difficult again.

Group Action for Wages and Contracts

Another consequence of a concentrated farming could be an opposite effect on distribution of income. It could even out the income distribution. Specifically, the returns to farm labor might improve. This probably would be brought about by wage workers forming unions and contractual farmers joining into bargaining associations. Both would be interested in negotiating higher rates for their labor or their resources.

Industry provides a lesson. The industrial revolution created sweatshops and held workers in poverty. When the disadvantaged groups won protection by law, including the right to form organizations, their situation began to improve. Similarly, a farm economy concentrated in relatively few hands might have the economic power to depress wage rates for hired labor or contract terms for integrated farmers if they had few alternatives. But as workers and contractual farmers turned to group action, probably condoned by legislation, the situation would change.

Challenge to Dispersed Farming

The question of the kind of farm production we want is not simply one of turning to a concentrated structure or keeping the present system. A dispersed system will itself change. The structure of the farms will change. The marketing system will change and new organizational forms will appear. Special problems will arise that a dispersed farming will have to face in the years ahead. One such problem is that income distribution within present-day farming seems to be becoming less equitable, and the situation could get worse.

The pattern of land ownership, the design of farm programs, the policies toward wage labor in farming, and income tax rules are policy matters that can influence the equity of income distribution in a dispersed system of farm production and marketing.

Summary

Our traditional dispersed system of farm production and marketing is being subjected to pressures that could result in a much more concentrated system.

A concentrated farming extending itself throughout the United States would bring material changes to the farms, farmers, and rural communities of the nation. It would have some effect upon consumers.

In the long run this kind of development would convert farming to the organizational structure now found in nonfarm industry and business. In particular, a corporate farming would resemble industrial manufacturing and a contractually integrated system would have some features in common with franchise merchandising.

The merits of a concentrated versus a dispersed farming system are to be judged by comparing the consequences with the goals for our farm economy.

Farm Operators

A concentrated system of farm production and marketing would conform to farmers' desires for more security and less risk. On the other hand, such a system would conflict with their wishes for proprietary independence. Farmers who are adverse to group action would not welcome the pressure to form bargaining associations or unions.

But the farmers' sharpest conflict relative to a concentrated farming is summed up in the damage done to a cherished principle that farmers can earn a fair reward within a dispersed system given equality of opportunity and a competitive market system. Farmers have been willing to use the powers of government to establish and protect that principle.

Already that image of the "best of all worlds" (by farmers' standards) has taken heavy blows. Our dispersed proprietary farming has suffered considerable loss of opportunity. For example, costs of entering farming have risen while systems of finance have been slow to change. Farmers may be less than candid with themselves about the present situation. On the other hand, a concentrated farming system would almost certainly reduce equality of opportunity further.

Tenants and Wage Workers

A dispersed proprietary farming system affords more opportunities and rewards to owner-operators than to tenants and hired workers. A concentrated system would probably present fewer disadvantages to the two latter groups. Moreover, they would benefit from various new protections such as unemployment insurance. As a result, tenants and hired workers are more likely to look with favor on a concentrated system than are owner-operators.

Suppliers and Marketers

The position of input suppliers and marketers toward a new kind of farming concentrated in a few hands would

depend entirely on whether a given firm were a part of the new complex or excluded. For those included, benefits could be substantial. For those excluded, the loss of access to individual farmers would be a serious, if not fatal, blow.

It is nevertheless fair to ask some questions irrespective of the good or bad effects on any one firm. Would it be in the national interest to convert the food and fiber economy to the conglomerate-firm structure that is coming to mark so much of nonfarm industry? Or would it be better, even from the point of view of agribusiness, to keep farming dispersed? The conglomerate-firm structure has its critics, and the questions they raise can be applied to converting a once dispersed farming to the same concentrated control system. These questions relate to economic power, to prolix bureaucracy, and to making the economic system a contest among giants.

Consumers

Consumers would be affected much less than other affected groups. Some economies of scale might be realized if farming were concentrated. But savings would probably be offset as the merchandising of food was transformed further toward promotional instead of price-based competition. On balance, consumers probably would pay food prices similar to or slightly higher than those prevailing if agriculture were dispersed.

But let us assume that consumers would be no worse off under a new system of farm production and marketing. Certainly a concentrated system would be more orderly than a dispersed one and most of the time it would operate with more precision. Occasionally the opposite would be the case, as when power struggles between contending groups — firm management versus organized farm workers or contractees, for example — disrupted operations.

U.S. farming, which has enjoyed a degree of isolation from the economic structure, life styles, and pressures of urban industry, will come face to face with them. An emerging question is: How much to yield, and how much to preserve? The question must be answered not only by economic criteria but also according to our ideas of the kind of world we want to live in. And the question must be answered in the arena of national policy.

Production of corn, cotton, soybeans, wheat, or other crops responds to supply and demand but the desired kind of agriculture, whatever it may be, is brought about through the painful process of forging a national policy.

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3. POLICY CHOICES AFFECTING ACCESS TO FARMLAND

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Wide distribution of land ownership has been a long established policy. Early U.S. farmers eager to farm land of their own found much in their favor. Primogeniture was ended. Land was first sold at low prices and then granted almost without cost through homesteading. However, availability of free land ended a generation ago and land has since become scarcer, more expensive, and increasingly subject to regulations over its use. Nonfarmers often successfully compete with farmers for ownership of land. The authors conclude that insofar as access to land determines the control of U.S. agriculture, "the key answers probably come from sources outside the agricultural sector." If farmers are to retain any control over changes in land-use policies, they must continuously articulate the needs and contributions of agriculture.

FARMOWNERS ARE SUBJECT to more public regulation of land use now than at any earlier time in the nation's history and all indications suggest an increasing public role in the future. Most regulations have been advanced as means for enhancing or protecting "the public interest."[1] Some of them are highly beneficial to farmers while others favor the interests of nonfarmers, but all speak to the future of agriculture and who will control it.

Will increased public regulation hamper or help farmers in their efforts to produce food and fiber? How does the balance between public and private prerogative in resource use influence who will control the agriculture of tomorrow? What types of public policy influence control of agricultural resources? These questions and their policy implications are examined in this chapter.

Laws Affecting Land Ownership

Wide distribution of ownership rights has long been favored as a matter of deliberate policy in the United States. Thomas Jefferson, who played a strong role in shaping our early land policies, felt that "the small landholders are the most precious part of a state" and that the government should encourage the establishment of family-sized farms. This goal was advanced when the nation developed its first public land disposal policies in 1785. It later became a leading objective of a series of laws that authorized and facilitated the sale and homesteading of thousands of acres into family-size farms.

Favorable public land-disposal policies provided a powerful magnet for attracting new settlers to the United States during the 1800's and early 1900's. More than a million acres of public domain land were sold or homesteaded in every year from 1829 through 1935, except in 1862, while between 10 and 20 million acres were disposed of to individuals in each of 26 years. The availability of cheap land facilitated the rapid settlement of the western acres of the United States. It was stirred by the speculative impulses of many buyers. The term "land poor" was commonplace along the frontier because buyers frequently acquired more land than they could reasonably expect to use at times when they really needed capital to adequately develop and improve properties they already owned.

A high point in private farmland ownership was reached in 1935 when approximately 1,055 million acres or 55 percent of the land area of the 48 states was in farms. These lands were occupied and operated by 6.8 million farmers. Since that time the statistic for total area in farms has increased because of the inclusion of the areas of leased public grazing lands reported in the totals for individual operators, but both the area of privately owned farmland and the number of farm operators have declined.

This decline was prompted by factors other than laws affecting land ownership. It is true that homesteading generally came to an end during the 1930's and that there was a flurry of legislation passed during the 1930's to prevent credit institutions and other corporations from acquiring large areas of farmland. But unlike in some other parts of the world, no legislation limits the size of farm holdings or the choice of land that individuals can acquire and hold for farming purposes.

[1] Public interest, for which no single definition exists, is a dynamic expression of political preference, changing as new choices and new information are introduced. The term is used to express the fact that social impacts of individual action do exist.

The principal land-related regulations that currently affect farm ownership include zoning ordinances, building and subdivision codes, regulations generated by soil and water conservation districts, and, more recently, laws designed to discourage and control pollution. Regulations with a less direct impact on farm ownership include tax levies, credit policies, insurance requirements, and housing regulations. The impact of these measures on farmers varies with the specific situation. In the past, farm groups have played a strong role in deciding or influencing which measures should be applied and how they should be applied. But this situation is changing. Increasing numbers of nonfarm rural residents as well as the "one man, one vote" phenomenon are shifting the balance of power in many communities. Regulations have prevented some farmers from carrying on practices that they have viewed as personally advantageous when the interests of others were affected. Additional conflicts between individuals and "public" preferences may be expected in the future.

In general, it would seem that land-use discretion open to the farm operator is diminishing. Two specific policy areas that illustrate this are discussed below.

Environmental Quality

Increasing penetration of nonfarm land uses into rural areas has raised a number of conflicts among rural neighbors. Nuisance ordinances are frequently the result where a noisy, smelly farm disturbs the more recent yet more numerous and vociferous residents seeking a "patch of green." Water pollution laws in several states have closed a number of feed lots. These and similar expressions of public interest in a pleasant rural environment are limiting the land-use options open to commercial farmers. The trend seems to be a result of both increasing urban penetration and increasing awareness of the environmental issue. *By introducing new elements of cost and uncertainty into production, environmental concern would seem to encourage further concentration in units large enough to permit required investment in environmental quality and discourage continued operation in urbanizing areas.*

Taxation

In addition to direct taxes on land, other types of taxes influence land holding. Capital gains taxes have long encouraged conversion of income to capital investment by landowners. Perhaps the greatest impact on landholding comes in the nonfarm category where individuals invest in land improvement or livestock to be converted to capital gain later. For commercial farmers in the 30-percent or above income tax bracket, capital gains taxes may exert some incentive to increase farm size, but for most farmers other factors outweigh the gain tax in a farm size decision.

Rising land values in conjunction with relatively modest capital gains taxes encourage landholding by nonfarmers. In addition to the "rural amenities" of land ownership, land offers an attractive hedge against inflationary impacts on income. Increasing land ownership by nonfarmers or token farmers will shift the balance of power in land-use policy farther from the commercial operator. Such ownership will also increase land prices making concentration of farm production more difficult.

The Tax Reform Act of 1969 has partially closed the tax benefits on returns from raising beef-breeding cattle. Small to medium investments still have tax advantages, however, thus encouraging dispersion of production. A similar effect may be noted on size of fruit orchards, resulting from the recent requirement for capitalization of all expenditures within 4 years. For field and vegetable crops, however, the Act encourages larger farm units. In California, for example, decreased federal income tax rates have increased optimum farm size from between 1,250 and 1,750 acres in 1962 to approximately 4,500 acres in 1972 *(1)*.

Land Tenure Arrangements

Perpetuation of the family-sized farm has been encouraged in the United States both by favorable legislation and land policies and by the practices followed in the settlement and development of new farms. Attempts were made to establish manorial estates in some of the northern colonies but these were unsuccessful because workers and tenants found numerous ownership opportunities available to them. Abandonment of the rule of primogeniture and of the entailment of estates, arrangements that usually called for the passing of estates to the eldest son or to the ranking male heir, also contributed to democratic equality between tillers of the land and to the assumption that all farmers should aspire to individual owner-operatorship.

A somewhat different situation existed in the South where cotton favored large plantations. But here too, many farms were operated in family-sized units. Emancipation of the slaves brought a shift to extensive use of sharecroppers and tenants in farming operation in the South. This situation differed from that found throughout much of the nation. The high rate of farm tenancy reported for the South, however, soon had a counterpart in the increasing tendency of farm owners in other commercial farming areas to lease their farms to tenants.

In 1880, 25 percent of the nation's farm units were operated by tenants. This gradually increased to a high

Table 3.1 — Number of Farm Operators by Tenure Class in the United States, 1930 to 1969

Tenure class	Year				
	1930	1940	1950	1960	1969
All operators	6,295,103	6,102,417	5,388,437	3,707,973	2,730,232
Full owners	2,913,052	3,085,491	3,091,666	2,116,594	1,705,702
Part owners	657,109	615,502	825,670	834,470	671,607
Managers	56,131	36,501	23,646	21,060	N.A.
Tenants	2,668,811	2,364,923	1,447,455	735,849	352,923

Source: U.S. Census of Agriculture.

of 42 percent in 1930. Since that time and since World War II in particular, the proportion of full tenancy has dropped to a low of 13 percent in 1969. The alternative opportunities provided by urban and nonfarm employment have played a major role in drawing tenants away from farms.

The increasing proportion of farm ownership reported since 1930 has been accomplished more by a decrease in tenant numbers than by an increase in the number of full owners. The total number of farm units in the nation dropped from 6.3 million in 1930 to 2.7 million in 1969. Meanwhile, the number of full owners declined from 2.9 million to 1.7 million while the number of tenants dropped from 2.7 million to 0.4 million (Table 3.1).

A major development in the distribution of farm tenure classes is the growing significance of the part-owner. These part-owners own and live on some farmland that they usually operate while they rent additional farmland. Their numbers increased from 656,750 in 1930 to 671,607 in 1969. Meanwhile, they extended their operations from the handling of 245.9 million acres in 1929 to 550.6 million acres in 1969. Their relative position as a tenure group has climbed from 10 percent of the farm operators in 1930 to 25 percent in 1969, operating 25 percent of the farmland acreage in 1930 and 52 percent in 1969.

Another significant development in the farm tenure situation has come with the increasing importance of absentee and large-scale ownership. Census statistics do not fully document the extent of these trends. It is common knowledge, however, that doctors, lawyers, bankers, and other urban investors have acquired considerable tracts of valuable and productive farmland around urban areas and in prime agricultural and ranching areas. There is, of course, some transfer of land from nonfarmers to commercial operators. Nonfarmers accounted for 38 percent of the farm acquisitions between 1968 and 1970 as compared with only a third of the acquisitions in the 1959-1967 period. The number of operating units involving holdings of 500 or more acres increased from 4 percent of the total in 1930 to 13 percent in 1969. These totals suggest but probably underestimate the extent to which farming corporations and large operators have extended their sphere of control over farming operations in many parts of the nation.

Trends in Land Use

The total acreage included in farms in the United States has decreased considerably since 1930 and particularly since 1950. In 1930, the nation had 990.1 million acres in farms. This total rose to 1,161.4 million acres in 1950 and then declined to 1,123.5 million acres in 1959 and to 1,063.3 million acres in 1969.

This decline in farmland area was associated with a reduction in the number of farm operators and also with a decline in the area of harvested cropland. Farm operating units declined from 6.3 million in 1930 to 5.4 million in 1950, 3.7 million in 1959, and 2.7 million in 1969. Meanwhile, the acreage of harvested cropland dropped from 359.2 million acres in 1929 to 344.6 million acres in 1949, 311.5 million acres in 1959, and 273.0 million acres in 1969.

Several million acres were added to the cropland total after 1930. Most of this new acreage came from the development of new reclamation projects in the West, but additions also came from private development activities and from the inclusion of the acreage in Alaska and Hawaii in the national totals after their admission as states in the late 1950's. These additions were more than equaled by the substantial reductions in total farmland area that came with the shifting of large tracts to shopping center, industrial, residential, highway, and other urban-oriented uses and with the shifting of still larger areas to less intensive uses.

The reduction of land in farms and of the total acreage harvested has not resulted in less production. Farm production almost doubled between 1930 and 1970 and total farm output increased 41 percent between 1950 and 1970 although there was 13 percent less cropland harvested. Increased use of technology has made it necessary to use a variety of acreage-allotment and production-control programs to restrict production at a time when most nations have been trying to encourage increased food production.

Table 3.2 — Average Size of Farm Operating Units in Acres

	Year				
	1900	1930	1950	1959	1969
United States	146.2	156.9	215.5	302.8	389.9
North	133.3	166.2	194.4	245.7	306.1
South	138.2	106.4	148.2	217.2	286.6
West	386.1	433.3	699.6	987.1	1,250.4

Source: U.S. Census of Agriculture.

With the decrease in land in farms and number of farm operators has come increasing commercialization of America's farms. Farm operating units have increased in average size as shown in Table 3.2.

Impact of Taxes

Farmers generally enjoyed a more favorable relationship between their property tax loads, their net incomes, and the market values of their properties during the middle 1940's. Property tax rates had dropped during the depression years of the 1930's and had barely started to rise again while incomes and property values had been pushed upward by wartime conditions.

In the quarter of a century that has passed since this "golden age" of agricultural property taxation, property taxes have risen to new highs in most states. The average property tax for farm real estate in the United States rose from 44 cents an acre in 1945 to 59 cents in 1950, $1.22 in 1960, and $2.27 in 1969. State averages in 1969 ranged from as little as 18 cents per acre in New Mexico, 33 cents in Wyoming, and 45 cents in Alabama to $11.45 in California, $12.31 in Massachusetts, and $18.87 in New Jersey. Although property value increased, the average tax per $100 of farm real estate value rose from 77 cents for the nation in 1945 to $1.13 in 1969. State averages in 1969 ranged from lows of 25 and 28 cents per $100 of farm real estate value in Alabama and Louisiana to highs of $2.43 per $100 in Maine and Massachusetts.

The net impact of farm property taxes on farmers can best be viewed in terms of the relative portions of net farm income it has taken to pay them. Farm real estate and personal property tax payments accounted for 14 percent of the average farm operator's net cash income before payment of property taxes and before deduction of rental payments to nonfarm landlords in 1940 (Table 3.3). Rising net cash returns reduced this to 5 percent in 1945. In 1950, it was 9 percent. Rising tax levels then brought it up to between 13 and 14 percent between 1960 and 1965 and up to 18 percent of the net cash income level in 1970. This is a national average. The precise impact, of course, varied greatly between individual operators and areas.

Table 3.3 — Relation of Farm Property Tax Payments to Net Cash Incomes Realized from Farming Operations in the United States, 1940-1970

Year	Farm property taxes	Net cash income realized from farming operations	Rental payments to nonfarm landlords	Percent of operator's net income
	millions of dollars			*percent*
1940	451	2,285	491	13.9
1945	557	9,251	1,128	5.1
1950	919	7,743	1,175	9.3
1955	1,141	7,667	1,054	11.6
1960	1,502	8,969	1,024	13.1
1965	1,943	10,840	1,483	14.0
1970	2,994	12,557	1,494	17.6

Source: *(2)*, pp. 57 and 62.

As the above data suggest, farmland values have not been closely correlated with net farm incomes. Purchases of land for urban-oriented uses, the acquisition of land for farm-enlargement purposes, the extensive investment of nonfarm monies in agricultural properties, and expectation of further inflation have helped to boost farmland values above the levels justified by current farm income expectations. This situation has complicated the managerial problems of bona fide farmers who have needed additional land for operating purposes and it has often resulted in higher property tax levies than farmers might otherwise have been required to pay.

Rising property taxes have posed a major problem for farmers in the fringe areas surrounding expanding urban areas. These developments in the areas adjacent to cities have brought the sale of numerous tracts of farmland for various urban uses. These sales have usually involved prices somewhat in excess of the value of the land for agricultural use.

Tax assessors have viewed these prices as indicators of the highest and best use-values of the land and have adjusted their farmland assessments to these levels. The impact of this action on local tax levies has been further aggravated by the movement of new residents with urban-oriented demands for public services to the local governmental and taxing districts. The higher tax levies that have followed have encouraged many farmers to sell out to speculators while those farmers who have kept their land in agriculture have often found that increasing portions of their net returns have often been needed for the payment of property taxes.

A variety of special use-value assessment arrangements have been authorized in approximately half of the states to protect bona fide farmers from taxing policies that could force them to shift or sell their lands for nonfarm use. The least complicated of these arrangements calls only for the assessment or classification of those lands used for agriculture at no more than their

agricultural use-values. This arrangement provides farmers with a tax break without imposing any responsibility on them to keep their lands in agricultural use.

A second arrangement calls for the assessment of eligible lands at both their highest and best use and at their current agricultural use-values, taxation of farmland at its agricultural use-value as long as it is used for this purpose, and the collection of a rollback tax equal to the difference between the taxes paid and those that would have been paid for some given time period — usually either three or five years — at the time a shift in use takes place. Other special arrangements provide for the combination of rollback taxes with requirements for agricultural zoning, the requirement that local planning commissions approve the designation of the areas eligible for special tax treatment, and the use of penalties in addition to rollback taxes when lands are shifted to nonfarm uses without a required period of notice.

Hawaii has gone farther than any other state in establishing agricultural and conservation districts in which lands are designated for agricultural and natural area uses. Similar systems of agricultural and natural area preserves have been recommended in other states. New York has authorized the establishment of agricultural districts that can enjoy some of the tax advantages of agricultural preserves. California and Washington have adopted somewhat comparable programs under which long-term contracts can be entered into between local governments and farmers for retaining rural areas as open space.

Like other business operators, farmers must pay income taxes, sales taxes, business taxes, inheritance taxes, and a variety of lesser taxes as well as property taxes. Each of these taxes has its effect on the decisions and actions of farm operators. Inheritance taxes, for example, can result in the breaking up of large farm holdings. These taxes along with the general property tax ordinarily have no more severe impact on farmers than on other groups.

Competing Demands for Farmland

Several million acres of land have shifted out of agriculture to other uses since the end of World War II. Much land has been taken for building new highways and interchanges. Urbanization has claimed substantial acreages in some areas. Reservoirs, parks, and recreation areas have taken large areas. Substantial acreages also have shifted to less intensive uses. Some of these lands are used for grazing purposes, are slowly reverting to forests, or are lying idle except for their occasional use for hunting and other recreational purposes.

Farming can rarely compete on an even basis in the marketplace with highways, residential subdivisions, and other urban-oriented uses of land. The developed farmland areas around cities often provide prime attractions for suburban and urban developers and for land speculators because their flat terrain and already available road, utility, and public-service systems require lower development costs than many equally accessible but less developed sites.

The use of good farmlands for urban development has already resulted in the loss of numerous prime agricultural areas. This process cannot be completely stopped. Millions of additional acres will be needed for residential and other urban-oriented uses by our expanding urban population. Some believe that more emphasis should be given to the channeling of urban growth to lands of limited agricultural potential. At the moment the nation has somewhat more than enough land to care for its food-production needs. Its supply of prime agricultural lands, however, is definitely limited. They argue that much of this area should be kept in agriculture because these lands have a higher potential for agricultural use and can be expected to respond better to new agricultural technology than can the large acreages of lower-grade lands that are equally well suited to nonfarm uses.

With the growing demand for nonfarm uses of land, large acreages now included in farms can be expected to shift to other uses. *This trend cannot continue indefinitely without creating serious problems for the nation.* Long before a true crisis develops, public programs and policies will be needed to reserve significant areas for future agricultural use. Some of these policies will be limited to applications of agricultural zoning and special land taxing arrangements. Effective action will call for careful land-use planning on a federal and state as well as a local basis and will probably require the establishment of agricultural districts and preserves within which the shifting of individual tracts to nonfarm uses cannot be accomplished without public hearings and the joint approval of public and private decision-makers.

Future Access to Ownership

Public policy in the United States has favored wide distribution of the rights of ownership in land. Prospective farmers have been encouraged to acquire, develop, and operate individual farms. This policy is still being followed. However, the great bulk of the area that can be profitably developed and used for agriculture has already been brought into use.

The general trend of recent decades shows a shifting of both farm acreage and farm operators out of agricul-

ture. Many of those who have remained in farming have found it expedient to operate farms of larger size. Farm credit policies have been devised to help keep the road to ownership open. Yet the need to acquire a larger operating unit together with the upward trend in farm real estate prices has definitely narrowed the scope of the average farm operator's opportunities for acquiring ownership.

What of the future? Present indications suggest that the average farm of the future will increase both in acreage and in value. The attraction of farm ownership for nonfarm investors, who are often only partly concerned with current returns, also suggests that farmers will continue to receive a low current return on their capital investments. *These developments can narrow the road to ownership and limit access to ownership to some potential operators who lack family or other special financial backing.* They can also significantly affect the ability of commercial farmers to influence land-use policies in ways favorable to agricultural production. Control of agricultural resources is simply being shared among more and more segments of society.

Farmers as a group are often viewed as economically conservative. The traditions of ready access to ownership and of relatively complete rights of ownership are still important to them. With increasing costs and new challenges from nonfarm land uses, farmers may develop more tolerance for public guidance of land use.

Possible governmental policies might include acreage controls and cropland retirement programs to limit production and help bolster farm incomes, special tax laws to ease the farmer's tax burden, and zoning and improved planning to protect agricultural areas from urban encroachments. Maximum limits might be placed on the size of farm enterprises and holdings to protect the more traditional farmer from domination by large corporate operators. Regulations also might be devised, as in some parts of Europe, to keep farms in the hands of farmers and to prohibit their acquisition by nonfarm buyers or heirs who do not intend to become resident operators.

Regardless of the policies recommended and followed, it appears inevitable that the farmland owner of the future will be more subject to public and social controls than has been the case in the past. *In fact, the key answers to the question "who will control agriculture" probably come from sources outside the agricultural sector.*

With our growing population and the expanding influences of urban society, public policies for the direction of land use are becoming more and more necessary. Zoning ordinances, subdivision and platting regulations, building codes, general land-use controls, and measures requiring the control of pollution and the protection of the environment will be demanded at all levels of government. At present, commercial agriculture frequently lacks an effective voice in generating and enforcing land controls. Lack of interest about government regulation among farm people has resulted in a shift of initiative to nonfarm interests where land-use policies are concerned. If they are to retain any control over changes in land-use policies, farmers must continuously articulate the needs and contributions of agriculture.

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4. EFFECTS OF ACCESS TO TECHNICAL KNOWLEDGE AND COMMERCIAL INPUTS[1]

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Farm production inputs have limited value without the knowledge of how to use them. From the early agricultural societies and fairs to today's universities, experiment stations, extension services, and market information activities, public policy has been aimed to make knowledge equally accessible to all farmers.

Likewise, policies to keep input supply markets competitive and to foster both supply and credit cooperatives have been intended to help all farmers.

Lessened public support for these activities, the authors emphasize, would give an advantage to larger farms and lead to more concentrated agriculture. Some present trends, such as financing through contracts, partnerships or corporations, already indicate a trend to more concentration. Yet, minimum-wage laws and other policies affecting hired farm labor could work to the benefit of a more dispersed agriculture.

THE HISTORY OF U.S. AGRICULTURE shows a constant quest for new knowledge and improved farming techniques, and, as a result, a changing mix of inputs in agricultural production.

U.S. agriculture developed primarily through individually owned and family operated farms. With policies that encouraged such widespread, dispersed ownership and operation, a large number of production input suppliers became established to supply the needs of farmers and farm families.

As the industrial revolution spread into America, manufacture of inputs away from farms replaced home production. Such inputs as tools, machinery, fertilizers, feed supplements, and other supplies came from factories. Over the years, traders, dealers, and supply centers became established in smaller towns to supply the commercial inputs to the large number of widely dispersed farmers. Now, as farm production is being concentrated in fewer operating units, the structure of input supply industries is also undergoing major changes.

In the early years of our nation, land owners and public officials encouraged agricultural societies, expositions, fairs, and farm publications. They recognized the importance of these means of communication for spreading technical knowledge that would stimulate agricultural growth and development. Later, the efforts of public officials and private citizens helped obtain public financing for higher education in agriculture, for agricultural research, and for educational programs to disseminate research findings through the Extension Service and through high school agricultural programs. These programs aimed to provide access to knowledge for all farmers, large and small. At the same time, the input supply system operated in an open market with farm inputs widely available to farmers at competitive prices.

In the early 20th century, public policies fostered the development of cooperatives to maintain competitive access in inputs. Government-assisted cooperative farm credit agencies were established later to help large and small producers obtain the credit needed to buy commercial inputs.

Credit, originally supplied by friends, relatives, merchants, and later by bankers, has become a highly specialized tool. It is the means by which a farmer today acquires the needed risk capital for both long-term and short-term production. Financing has become a key part of the whole management and decision-making process.

Inputs and Knowledge Affect Control

Today the policies that affect the availability of production inputs and the knowledge of how to develop and use them for maximum return also affect who will control the agricultural production process. Two central issues emerge in this changing structure:

(1) Who will have control of commercial agricultural production? Control could be measured by amount of

[1] Appreciation is expressed to Walter Sellers and Allen Smith, Economic Research Service, USDA, for their review of preliminary drafts of this chapter.

production coming from farms of different sizes. Or it might be measured by the organization or groups making the major decisions in the food production and marketing system, whether it be suppliers of inputs, farm producers, marketing firms, or retailers.

(2) How will present farm owners, operators, workers, and agricultural business firms be affected by a further reduction in the number of farm operating units?

The major issues affecting control through access to technical knowledge and commercial inputs are:

- *How will new knowledge be discovered and disseminated?* Limited access to research findings will give special advantage to those who get it first. Widespread access to new research findings would avoid giving special advantage to any individual or group. However, even with widespread access to new research, some may be able to use the findings and gain more control than others.
- *How widely available will be the benefits of the educational system to all producers?* A policy that limits the educational opportunities to some individuals or groups over others will lead to competitive advantage and control.
- *Will complete knowledge of transfer prices be available so that buyers and sellers have equal understanding of demand and supply conditions both in the input supply and product markets?* Otherwise, an advantage to the side which has more complete knowledge would result.
- *Will all producers have access to credit and financing at competitive rates, whether they borrow in large or small amounts?*
- *What would be the impact of unions, higher minimum wages, and other labor policies that affect the competitive positions of large and smaller farms, the supply of available labor, and the control of decisions dealing with hired labor?*
- *Will competitive conditions be maintained in procurement of production inputs?* Any advantage secured by one size or type of producers could lead to control.

The Quest for Technical Knowledge

Public policies provide an important means by which food and fiber producers gain access to technical knowledge and commercial inputs. This is done primarily through the experiment stations and the Cooperative Extension Service. Manufacture and distribution of commercial inputs, on the other hand, are carried out primarily through private industry. Credit is supplied through private sources and government-authorized cooperatives. The United States and most Western European countries follow this pattern.

Research

The need for more scientific testing of techniques, materials, and methods came with the advancement of farming methods. The Hatch Act of 1887 and successive acts have established a system of public-supported agricultural research. Some private farm and agribusiness firms and industries have drawn upon public-supported research findings and have further advanced the body of scientific knowledge through their own research efforts.

Although the entire job of agricultural research could be turned over to private industry, the present system of combining public-supported research with freedom for private firms to do research provides some advantages. *Public-supported research findings are available to all agricultural producers and business firms.* Research projects deal with a wide range of agricultural production in all parts of the country. The cost of such research is paid by the taxpaying public. Some private research is paid for directly by product users, or from grants supplied by the government or by foundations.

Research carried out by private firms may take two forms: (1) research carried out under contract and sold, as any other service, for a price to cover its cost; and (2) research carried out by the firm, or under contract, usually to develop a new product. The second type is likely to be done only for products promising substantial commercial importance.

Those who have need for research findings with limited commercial value would probably contract for the research. Usually only large firms or businesses could afford to do so. Therefore, a policy to confine research mainly to private firms would contribute to increased concentration in farming operations.

Some types of research such as soil conservation or pollution control have a broad public interest. Unless it also has commercial payoff, few individual firms will undertake it.

Education

Scientific knowledge in agriculture has evolved as a jointly financed effort from federal, state, and private sources. Public and private schools and universities and industry draw upon publicly and privately supported research in their teaching and business activities. Private industry uses publicly and privately developed technology to provide tools, equipment, and know-how to help further public educational effort.

Most scientific agricultural information is widely available to all producers and agricultural businessmen through extension programs, meetings and short courses, and formal classes in high schools, colleges, and universities.

If public support for agricultural education were substantially reduced or eliminated, we could expect pri-

vately operated agricultural schools to develop. They might be quite different from what we have now. If public research findings were available, they would draw upon them in their teaching programs. If no public research findings were available, the private schools would have to carry out some research or draw upon other private sources as best they could. The quest for new knowledge by private firms would continue, and they would sell this knowledge through their products or services. Sources of unbiased technical knowledge might be more limited and the direct cost to the user might be higher than under publicly supported educational research programs. Although private industry could expand its role in education, the public role might still be needed to serve as a referee or guardian of accuracy and fairness. Accessibility could be biased in favor of the more affluent farmers.

Management Information Assistance

Management requires knowledge. The policies that affect the access to this knowledge are just as important as the access to latest technology concerning feed or fertilizers. Cooperative management associations of producers have developed with joint support from public funds and private member fees. In addition, private management consulting firms and services have developed drawing upon public and private research in management methods and techniques.

The present combination of publicly and privately supported management services has given producers a variety of choices in obtaining the type of services they need at prices they can afford. Elimination of public support for management information systems would result in higher costs to producers, put smaller operators at a disadvantage to larger firms, and further stimulate the trend to fewer and larger producing units.

A policy issue for the future is: To what extent should public funds be used for research and extension efforts specifically for smaller farmers, many of whom obtain only part of their income from farming and the remainder from off-farm employment? The decision on this question will partly determine what part of agricultural production continues among this segment of the farm population.

Performance Rules

Increased technological development, valuable as it is, exacts its price. It requires safe, responsible application, so we have established regulations and laws protecting the public interest. Public education has helped people to be informed and to abide by the laws.

Without public education on performance rules, private sources would handle the job wherever they could do it profitably. But the consequences of such a policy would be more slanted toward larger producers and marketing firms that could afford to hire information and legal services. *The key question is what effect would follow upon control of production and the concentration or dispersion in number of producing units.*

Market Information

Knowledge of current and prospective supplies, buying and selling prices, and other market conditions is necessary if buyers and sellers are to make informed decisions. *If any policy permitted one side to have more knowledge about demand-supply conditions, the advantage would probably go to the larger, more strongly financed firms that can gather their knowledge without public support.*

A publicly supported market news and information service has been provided over many years. Public sponsorship of crop and livestock estimates, for example, provides both buyers and sellers with forecasts of supplies as a guide in setting prices. Livestock numbers provide a gauge of prospective demand for feed crops and manufactured feed products. Without public reporting of supplies and prices, private market-reporting services would develop similar to some already in existence. Under such a system, some question inevitably is raised as to accuracy or integrity of such private services.

And again, any reports that would be more accessible to larger operators would give them advantages in buying and selling over smaller farmers and eventually lead to greater concentration and control among the larger farm units.

Financing: Availability, Rates, and Terms

Risk capital and a continuing line of credit are essential to modern farm production. Consequently, any policy that makes credit more available, or on better terms to certain individuals or groups of producers would affect the future structure of agriculture — even perhaps leading to eventual control by those with that advantage.

Financing of farm production has become more complex in recent years. Traditional credit — money borrowed though country banks, production credit associations, federal land banks, life insurance companies, and individuals — is still important. However, modern financing of farm production now also extends to the following sources and methods.

Merchants and Dealers

Independent businessmen or affiliates of larger manufacturers or suppliers may supply the credit for short-, intermediate-, or long-term periods. Established policy

permits, with minimum government regulation, direct loans by the firm or refinancing through sale of credit paper to other financial institutions or to a credit affiliate of the parent company.

Rental and Leasing Services

These have emerged as another means of financing of inputs. Machinery and equipment companies can lease or contract equipment instead of selling it to the user.

Control Over Farmland

Since control of land has much to do with the control of crop production and of some livestock production, public policies dealing with availability of farm real estate financing for both operators and nonoperators can influence the future dispersion or concentration in farming. Availability of credit relative to prospects for return on farm real estate investment can influence what type of nonoperating owners purchase land and the control they exert.

The vast domain acquired during the 18th and 19th centuries was sold or given away under policies aimed to disperse private land ownership and development among a large segment of the population. The federal land banks, the emergency lending programs of the 1930's, and the Farmer's Home Administration were later established to further this policy.

Although the number of farmers and farms has declined in recent years, the 1969 Census of Agriculture shows that 62 percent of farmers owned all of their land, 25 percent owned part of their land, and 13 percent rented all their land *(5)*.

Unless individual landowners and those seeking ownership can continue to obtain financing at competitive rates, the typical pattern of dispersed farm production is likely to gradually shift to concentrated larger-scale operations. Any policies that limit availability of credit for land purchases by individual farm operators would undoubtedly lead to greater concentration of land holdings by owners who can finance their purchases as large-scale industry does.

Options and Choices in Sources of Financing

In recent years, public policy has fostered a privately owned, government-regulated banking system and in addition has supported cooperative and government-funded credit through the agencies of the Farm Credit Administration and the Farmer's Home Administration.

Our present private credit system and the cooperative farmer-owned production credit associations and land banks have been accepted and used by farm producers. The federal intermediate credit banks which provide capital funds for production credit associations and the banks for cooperatives tap the public money markets for funds at competitive rates. The Farmer's Home Administration carries out lending activities as authorized by Congress and includes some production credit, emergency assistance, and government-guaranteed production loans. The Federal Reserve System and the Comptroller of the Currency set rules and regulations for operations of commercial banks.

Financing Through Contracts

Integrated production of some farm commodities has revolutionized the entire process of input and credit use. For example, in the broiler industry major feed companies supply feed, chicks, medicine, and a guaranteed market for the finished birds instead of the traditional loans by institutional lenders. The farm operator sells his services instead of buying feed. The contractor may also rent or lease equipment or provide guaranteed loans. Contracting and integration have thus become vital parts of supplying inputs and maintaining markets for some agricultural commodities.

The effects of integration upon number and location of producing units will depend upon the specific needs of the contractor. *But in many cases the contractor may actually control more production decisions than the man who raises the contracted crop, livestock, or poultry.*

If integrating and contracting spread to other commodities, the access to production inputs for some farm production may be limited largely to those who participate in the integrated system. The issue will not be so much of obtaining available credit at competitive rates, but of obtaining a contract that provides acceptable returns to producers who are selling their labor services along with the services of their land, buildings, and equipment.

Financing Through Partnerships and Corporations

Traditionally, to obtain credit, farm operators have agreed to pay a fixed rate of interest on the amount borrowed for a specified period of time. Examples of large-scale financing through shares of equity such as partnerships, joint ventures, and corporate stock suggest that agricultural credit and financing practices will continue to undergo change.

To gain the advantages of joint ventures, partnerships, and corporations to organize farm production and obtain the needed equity and operating capital requires so much financial and legal skill that a medium- to large-scale operation is required.

Some partnerships and corporations may include only part of a farm production business such as grain drying, storage, or certain major machinery services.

When certain options in financing and procurement of inputs are selected, the farm producer may lose some control over production and marketing decisions. Financing arrangements accessible under various circumstances can shift control to the source of the financing. The source may be a financial institution, an input supplier, a contractor, or firms or individuals that provide financial resources through loans, bonds, stocks, or other shares in the equity.

Use of the Futures Market

The futures market can help farmers get financing. Hedging crops or livestock may give some producers access to more financing than they could otherwise obtain. Banks or other lending institutions may extend credit where the operators know how to use futures contracts successfully. Although producers of all sizes could in principle use futures markets as a means of gaining access to financing, the medium- and larger-size operators will probably be able to take greatest advantage of them.

The Commodity Credit Corporation

The CCC has also become a major source of credit for farmers through commodity loans. Eligible participants in the commodity support programs can receive loans at lower rates than those charged by lending agencies. For some commodities, if market prices are less than the loan rate at the maturity date, the government will take over the crop and the "loan" becomes interest free.

Economic Effects

As stated above, financing policies will affect the economic organization of agriculture. If individual operators cannot obtain sufficient credit, some will take other employment, while others will either sign contracts or form partnerships or farming corporations to finance their production.

In times of rising interest rates, state usury laws that restrict interest rates paid by individuals could encourage formation of farming corporations that are not affected by these laws. The basis on which state usury laws are applied to farm operators, whether they are considered as individuals or business firms, will affect their available supply of credit.

Major shifts in financing procedures are likely to encourage more concentration in some types of agricultural production. Variable mortgage credit introduced by Federal Land Banks provides for changing the rate of mortgage interest during a long-term loan. The flexibility gives the lender some protection against inflation but could add costs for the borrower. If public policies do not sufficiently limit inflation so that long-term loans are feasible, then a shift in the methods of financing risk capital will take place. These methods may include a share of gross returns to the lender, integrated contracts, joint ventures and partnerships with lenders, or public offering of stock to finance large capital investments.

Such shifts would stimulate the trend to larger-scale operations and the concentration of agricultural production into fewer and larger units.

Social Effects

Credit policies that encourage large-scale enterprises and give them economic advantages over smaller, more dispersed farming operations will force out the smaller operations, reduce the number of support input supply firms, and produce a different type of social structure in rural communities. A large number of independent operators would gradually be replaced by employed rural residents who work for large-scale farm enterprises.

Group Action in Procurement

The central goal of all group action in procurement of farm inputs has been to obtain the items needed and, if possible, reduce the cost from what it would be through individual action. Public policy decisions also influence or affect group procurement.

As group procurement activity increases, the policy issue may be whether open markets for input supplies will continue. Or, for some items will they be available only to participants in the group?

The general policy in recent years has been to permit group action in procurement because such action reduces costs to producers. Presumably, it thereby lowers costs to buyers and consumers of agricultural products.

The Capper-Volstead Act, passed in 1922, set national policy in this direction. This Act exempts producer cooperatives from antitrust laws. As a result, a cooperative association that is properly organized and functions in a normal manner is not acting in violation of antitrust statutes. However, this does not permit cooperatives to engage in prohibited practices such as boycotting or other activities that unduly restrain trade *(1, p. 53)*.

State laws authorize organization of cooperatives and give them rather broad powers for organization, operation, and financing. Federal laws exempt them from payment of income tax on those funds paid as patronage refunds and from registering their securities with the Securities and Exchange Commission *(4, p. 694)*.

Cooperatives have stimulated competition in supplying inputs. Generally farmers, whether they buy from cooperatives or privately owned firms, benefit from lower prices or improved quality and service.

If cooperatives serve both large and small farms, they provide advantages to both. So even though the number of farms has declined, cooperatives have helped maintain some dispersion in the size of farms. As long as they serve single proprietors, partnerships, and corporations, they will have little effect on the business organization of farm production.

If cooperatives can effectively serve as purchasing and marketing agents for small farmers, they can help to maintain smaller, dispersed farming units. However, a problem among many cooperatives has been a lack of discipline within the membership. Further, to the extent cooperatives reduce input costs, they can lower production costs, encourage adoption of new technology, and increase returns to labor and management. *To the extent that they can maintain current farm operations by reducing costs, cooperatives may slow the trend to reduced farm numbers.*

Employing Farm Labor

Public policies dealing with hired farm labor are concerned with (1) proper compensation of farm workers; (2) their financial security; and (3) their health and safety.

Policies are well established in employment of industrial workers to protect them from exploitation by their employers. Many of these policies are gradually being extended to farm workers. The national policy direction seems clear: *As agriculture becomes more like nonfarm industry, the policies and regulations that deal with industrial workers will be applied to farm workers. As a result, employers in agriculture will give up part of the control of their decisions dealing with employees to public agencies and in some cases to labor unions.* However, on farms where only two or three full-time laborers are employed, unions will have comparatively little direct influence compared with those operations with larger numbers of employees.

Until recent years, legislation affecting employed workers excluded farm labor. However, hired farm workers are now covered by some legislation and further changes can be expected.

Minimum Wages

In 1966, farm labor was included under the Fair Labor Standards Act. A minimum wage was established beginning at $1 in 1967 and increased by steps to $1.30 by 1969. It applied to all employers who hired more than 500 man days of farm labor in any calendar quarter of the preceding calendar year. All larger employers, those who hire an estimated total of 500,000 workers, are affected. A broader coverage to include more farm workers has been proposed *(6, pp. 57-58)*.

Under the Sugar Act of 1948, producers seeking support payments are required to pay fair and reasonable rates established by the U.S. Department of Agriculture.

The effect of raising minimum wages varies in different farm operations. Where employees are highly skilled, their wages would already be above the minimum. Where large numbers of unskilled workers are employed, the increased cost would encourage mechanization to reduce the number of workers needed. But mechanization forced by higher-priced labor may reduce the competitive position of large-scale operations. *Low-cost labor gives benefits to large operations. When costs are forced up on large-scale operations, those farms that use mainly family labor become more competitive.* Thus, when minimum wages are raised, farms using family labor may be in a more favorable position.

Safety

The Fair Labor Standards Act in addition to minimum wages also sets a minimum of 16 years of age for employment in agriculture during school hours. Outside of school hours and vacation periods the Act sets no restrictions for children performing nonhazardous work on farms. It does set limitations on certain hazardous occupations for persons under 16. Under the Sugar Act, persons under 14 cannot work and those 14 and 15 can work only eight hours a day.

The Occupational Safety and Health Act of 1970 aims to assure all workers safe and healthful working conditions. All business and industry including agriculture is covered except those covered by other job safety laws. Employers must meet certain standards to keep their place of employment free from recognized hazards and report occupational accidents and illnesses of their employees. Employees are required to comply with any rules, regulations, and standards that apply to their own conduct. An estimated 1,300,000 farms and all employees on these farms are subject to the provisions of the Act.

Safety laws and regulations increase costs for employers with large numbers of employees more than for family farms with few or no employees. Regulations dealing with employees under 16 years of age usually exempt family farms. A change that would restrict work by children on their family's farm would raise labor costs for those families that had to replace the children with hired labor.

Other Farm Labor Policies

These include workmen's compensation, unemployment compensation, health insurance, legal assistance,

and measures dealing with health and welfare of migratory workers. The key issue is how these policies affect the cost of employed labor and the competitive position of individual farm operations. If operations hiring only a few workers were exempt, the added costs would affect large-scale operations more than the smaller ones. Those who hire migratory workers encounter certain costs not faced by those who hire only permanent or local resident seasonal workers.

Labor-Management Relations

The National Labor Relations Act of 1935 and Labor Management Relations Act of 1947 (Taft-Hartley Act) specifically excluded agriculture. But boycott campaigns against some foods and increasing efforts to organize farmworkers' unions have focused attention on these exclusions.

The general labor policy choices in agriculture are (1) to extend the policies as used in industry; (2) to modify and adapt labor policies used in nonfarm industry so they are workable and acceptable in agriculture; and (3) to maintain the status quo and resist all new proposals that would give more benefits to workers and raise cost to employers.

Although many issues remain unsettled, it appears that national policy is moving toward the middle choice (2) above. As already noted, since substituting capital for labor usually requires sizable investment, large-scale operations could lose some competitive advantage over smaller ones where a larger proportion of the labor is supplied by operators and their families. Unionization would increase labor costs so the farm operation that employs a higher proportion of unionized labor would have higher costs per worker than those operations with nonunion or family labor. However, unionization would tend to raise the average level of all farmworkers' wages. A key question concerns the size of operations most affected by unionization and how family workers would be affected. At present family workers do not appear as a major issue in the drive to unionize farm labor.

How unionization would affect the productivity of farmworkers is not certain. Presumably it would rise since efforts to raise minimum wages or broaden coverage to more farms would raise labor costs and discourage employment of the least-productive, lowest-paid workers. Such workers would be forced to migrate or remain unemployed.

Availability of Competitive Sources of Inputs

Policies that restrict availability of purchased inputs or raise costs to some producers more than to others are bound to affect who will be able to enter and stay in business. Past policy on the procurement of inputs has encouraged competitive open markets and efficient distribution, has authorized farmers to form cooperatives, and has blocked some mergers that would reduce competition or give one firm a monopoly position.

The Robinson-Patman Act of 1936 was intended to prevent discrimination by a seller toward competing buyers. Yet it does not exclude quantity discounts as long as all buyers have equal opportunity for these discounts. Differences in prices must be based upon provable differences in manufacture or delivery, resulting from differing methods or quantities in which such commodities are sold or delivered.

Thus the law still permits firms that buy in large volume to gain a cost advantage through discounts and purchasing agent techniques that smaller firms often cannot obtain (3, p. 753). To give some assistance to smaller operators, public policy has encouraged supply cooperatives and helped make their operations more efficient. Such a policy gives them an opportunity to compete with other supply firms and to provide goods to smaller farm operations at costs lower than otherwise would be possible. As a result, some smaller farm operations may be able to keep a sound financial structure. The result is to encourage dispersion of farm production units.

There are specific policy issues regarding availability of each purchased input. For example:

Credit. Policies that affect farmers include state branch banking laws, bank holding company regulations, rules on correspondent relations, lending regulations for federally chartered banks, and sale of bank paper on financial exchanges. The Farm Credit Administration is subject to regulatory law.

Seed. Public and private agencies are continually developing new varieties of seed. Distribution policies for new seed varieties determine the control of production from that seed.

Insurance. Public policies for crop insurance affect its availability to protect against major risks and thus the survival power of various sizes of production units.

Pesticides and fertilizers. Any policies that would control use because of possible effects upon quality of environment could have a critical impact upon production costs, organization, and type of future production.

Farm machinery. Although machinery has greatly increased labor productivity and is larger and more complex, the decline in number of farmer customers has brought a decline in the number of farm machinery dealerships. Fewer firms now serve a much wider geographical area. Present policy gives farm implement companies and other input suppliers freedom to make business decisions about their location including distribution

points. As a result the consolidation of input firms and the concentration of farm production units is taking place at the same time.

Input Suppliers in Farming

At the same time that smaller, dispersed farm operators should be concerned about maintaining a competitive source of inputs, input suppliers are mapping strategy to engage directly in farm production. Feed companies have become widely involved in contract broiler, turkey, and egg production. Numerous suppliers have considered custom farming and supplying all their product directly from their manufacturing plants.

These developments, which link production of one or more key inputs directly with the farm operation, may produce an abundant supply of a quality product for consumers. But such changes always trigger other effects upon the independent merchants, dealers, and farmers who previously operated under a more open competitive system of markets for input supplies and the farm-produced agricultural commodities.

The successful outcome of these pilot efforts, permitted under our free enterprise system, could undoubtedly encourage more concentration of production in these integrated efforts and reduce the number of independent dispersed farms as we have known them in the past.

Policies that maintain an open market for production supplies at competitive prices in widely dispersed locations will help maintain widely dispersed numbers of producing units. But any policies that permit a reduction in the competitive market for inputs will also encourage larger-scale concentrated production of agricultural commodities.

The integration of input suppliers with direct farm production is only one part of the changing structure of production and marketing of agricultural commodities. Others are discussed in Chapters 5 and 6. *The movement of outside capital and management into agricultural production raises many policy issues regarding the traditional freedom and independence of individual farm operators. The control of production and marketing of the farm products involved is often at stake.* The final decisions regulating these developments will involve not only economic considerations, but political and social considerations as well.

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5. POLICIES AFFECTING ACCESS TO MARKETS

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Access to markets is essential to a dispersed, proprietary farming system, but traditional access is deterioriating even as the interaction between farmers and markets gets tighter. Those who continue farming face these choices: Preserve access to an open market system or protect market access through group action. Rhodes notes problems in preserving traditional markets and comments on possibilities and problems in both bargaining and cooperatives as a means of group action. If farmers choose group action, new legislation and services will be needed from government to support bargaining efforts and foster democratic processes for group organization and action.

THE SPECIAL CHARACTERISTICS OF FARMING once shaped agricultural marketing institutions. Now this situation is beginning to be reversed *(1, Chapter 7)*. A new agribusiness is beginning to reshape farming. The problem of accommodating farmers and their marketing institutions so as to obtain a mutually acceptable access to markets is becoming the primary concern of agriculture.

Markets are an indispensable part of any economy. Even the highly socialized economies have to perform all the marketing functions and also find it necessary to arrange for some form of pricing and often some form of modified competition between alternate suppliers. Likewise, even in a highly concentrated economy in which a few corporations could dominate farm production and processing, markets would exist at some levels. Corporations so giant that they produce all farm inputs and all farm products, and then perform all the functions of marketing all the way to the consumer are in principle possible, but they seem too unlikely to be worthy of serious consideration at this time. Even they would purchase the raw materials from which they manufactured the "farm input."

Some markets will continue to exist in agriculture. However, the focus in this chapter is: How does access to markets affect the proprietary status or control of production by today's farm people? The preferences of farmers for such status are discussed in Chapter 2. Are conditions of access changing in ways that promote or limit the maintenance of that status? How might public policy be used to protect farmers' access to markets? How can the market status be enhanced even where farmers have lost their proprietary status and are now virtually employees of vertically integrated agribusinesses?

Interaction of Agriculture and Its Markets

In the past, agricultural products were low-valued, often perishable, and produced on thousands of individual farms dispersed over millions of square miles. Quality and quantity were fixed as much by the wiles of nature as by the independent decisions of millions of farmers.

A marketing system was shaped to fit this agriculture. A great network of product assemblers, traders, processors, and wholesalers developed to purchase, assemble, sort, process, and distribute farm products. Some of the agricultural marketing firms became very large but many more remained small local or regional firms. It was a marketing system without an industrial counterpart. *Whereas in industry marketers shaped the product, controlled its output, and designed the market channels in order to market the product, in agriculture production shaped marketing.*

However, this sharp difference is changing. The demands of the supermarket for specific quantities and qualities are being transmitted to processors and producers and are being responded to. *More important are the efforts of various agribusinesses, including feed companies, to tie up markets and sources of agricultural inputs.*

Evolution of Agriculture and Agribusiness

A broader perspective for understanding the changing nature of farmers' access to markets features important changes in both farming and in agribusiness. Some changes in each have been induced by changes in the other, but outside developments have been at work too.

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Agriculture

Farms have evolved from fairly self-sufficient units to modern specialized high-production firms, as indicated in Chapter 1. The amount of cash receipts paid out to purchase farm inputs has risen from 10 percent to 75 or even 90 percent in some commodities. The multi-product, general farm has evolved into a specialized producer of one or two products. Farming has become a science with a resulting higher predictability and controlability.

Agribusiness

Agribusiness has had a somewhat similar evolution. Firms have grown as techniques have improved. As production of a particular product became specialized by farm and by area, the nationwide assembly network for that product was shrunk accordingly. Sales volumes per farm often became large enough that it was economically feasible for the marketing firm to buy directly from one farm rather than wait for the small volumes of many farms to be consolidated at a terminal or auction market.

Other important developments took place. The managers of large, modern agribusiness firms began to adopt the same techniques used by other industrial firms. After all, they competed in the same markets for capital and their management personnel were usually educated in the same philosophies and techniques. These firms began to ask how they could design the products and the market channels and control the output to and from farmers. For various reasons it is still not possible to market feed to farmers or pork from farmers in exactly the same way that automobiles are produced and marketed, but the differences are steadily diminishing.

Acquisition Systems

Agricultural marketing firms are giving increasing attention to developing differentiated, brand-name products that will help establish a reputation for them with consumers. They are also seeking ways to develop greater control over the supplies of farm products that they process and market. *Rather than being passive competitors in a traditional agricultural marketing channel, they are developing acquisition systems for obtaining their products.*

A classic question for every industrial firm is: Shall we buy it or make it? Thus, some industrial firms have become vertically integrated as they have begun manufacturing many inputs that were formerly purchased. Likewise, the agribusiness firm asks: Shall we buy eggs in the current open market, sign purchase contracts a month or a year ahead for eggs, contract for their production by farmers who feed our feed to our chickens on a piece-wage basis, or produce the eggs in our own poultry houses? In the production of a significant number of farm commodities, all four of those options are open to a firm building an acquisition system.

Effect of Feed Companies on Access

New practices by farm supply firms including feed companies where livestock or poultry are involved have also affected the access of farmers to markets. For example, as feed companies competed for the business of broiler and turkey growers, they found that they could gain more market security by contracting with growers to use only their feed for a given period or brood. In return, the companies gave credit to the grower. Then a feed company found a grower who would grow on a profit-share basis and another who lacked any risk capital but would grow birds on a piece-wage basis. Thus the dominos tumbled until today virtually all growing broilers are owned by integrators — feed companies, processors, or combinations of the two. Growers no longer have any access to a market for broilers rather there is a market for broiler-growing services.

Access to markets is in transition. While there are still viable open markets for hogs and cattle, there are few for turkeys and none for broilers. While there is always a market for anybody who wants to grow yellow field corn, the processed market for sweet corn or other special types belongs to those with contracts. In some cases, the growing fruits and vegetables are actually owned by the processor and the "farmer" is being paid rent for his land and custom wages for the particular services that he performs — under supervision — in growing the crop. He sells services rather than sweet corn or tomatoes. The farmers are enmeshed in some of the new problems of access to markets.

Market Deterioration

While vertical integration is the chief threat to traditional access to open markets, it is not the only one. For reasons too numerous to list here, deterioration has taken place in open markets for many agricultural products. Increasingly, prices are being set through individual negotiation or by formula *(3)*. The farmer-seller in many such transactions have to depend upon their own abilities to translate general market news into the going price for their particular products. Access can be a physical problem. The business failure of the nearby processor in such commodities as sugar beets, processed fruits and vegetables, and even lambs may sharply diminish market access for producers.

Farmers are becoming increasingly concerned about the viability and equity of price-making forces in deteriorating markets. Many of them are examining group action — not to try to raise price, although that might be nice, but rather to insure their continued access to dependable markets with credible price-making.

Farm Size Complications

Market-access problems are complicated by the growing inequalities at the farm level. The widening gap between "the bigs" and "the smalls" in farming is described in Chapter 1. This gap relates in various ways to the problem of access.

The big cattle feedlot may have a dozen buyers a week coming by; the farmlot feeder may be lucky to see one buyer occasionally. The feed companies offer the big feeder quantity discounts and special services, while even the co-op of the little feeder wishes that he would take his business elsewhere. The big producer tends to be more apt than the small one at mastering the techniques of producing the right product at the right time for the right market. Those agribusiness and educational agencies that provide essential information for giving the farmer a proper market orientation find themselves concentrating their efforts with the big farmers where the production is. Perhaps public agencies need to direct more of their efforts toward the smaller farmers (see Chapter 4).

Policy Options

Farmers have options within two alternate strategies. On the one hand farmers may try to preserve access, as individuals, to an open market system. On the other hand, farmers may seek to protect market access through grouping together.

Certain individual prerogatives must be relinquished by farmers in the group approach, so that it is in some ways inferior to the individual approach. However, individual access may not be attainable in some areas.

Many farmers will find it difficult to choose between such alternatives. Some of the policy options may be inconsistent with their general political philosophy and value system. Some options will be strongly opposed by one or more other segments of society. Nevertheless, the various options need to be understood as a basis for democratic choices.

The final choice between a market and a group action system is not an individual one. Farmers will have to struggle collectively even to maintain the market system; otherwise it will be eroded away and then only group action will be left.

Access as Individuals

If farmers are to protect their future as independent owner-operators they must strive via political and economic group action to prevent vertical integration and to maintain openly competitive markets.[1]

Vertical integration is already here in some farm products, is a threat in others, but is very unlikely in the foreseeable future in some others. Legislative prohibitions or hindrances are one proposed way to control integration. For example, farmers might seek passage of one of the long-dormant bills to prevent meatpackers from feeding many of the livestock they slaughter. There are arguments that a plant can be run more efficiently if some livestock can be brought to slaughter at a moment's notice. Such gains in efficiency (which are apparently minor) might be obtained by allowing each packer to feed up to a maximum of 5 percent of his quarterly supply.

More to the point would be a similar limit on vertical integration by feed companies. Again, it can be claimed that the individual efficiency of a given feed mill can be increased by allowing it to own a surrounding captive market of livestock or poultry that will permit the plant to run at full capacity. However, a view of the macroefficiency of the feed-broiler industry over the past 15 years tends to negate that argument. The industry has kept building more plants and putting out more broilers until a few of the large firms and many of the smaller ones have pulled out because of the low and fluctuating profit opportunities. And yet the cycles of overproduction continue. However, in some instances the preservation of a market system will entail some economic costs.

Contract Differences

Farmers may find that certain types of vertical integration infringe upon their proprietorship much less than other types. The kind of contract used is of fundamental importance. For example, a marketing contract is much like a forward sale. Under a marketing contract, a farmer as a proprietor agrees to market specified quantities of his production in the future at a price fixed either at the time of contract or later.

It might be feasible to develop a market for the contracts themselves. This could be almost as open and competitive as a product market. This kind of contract would give the processor much of his desired market security and also a good opportunity for coordination of quality and quantity flow.

[1] The Family Farm Act of 1972 proposed another approach to protecting the future of independent farmers.

On the other hand, if the vertical integration involves a production contract, which is essentially an employer-employee relationship, then the farmer's access to market is much more akin to that of a laborer than that of a proprietor. Thus public policy might seek to discourage the production type of contract but accept the marketing contract.

Maintaining Open Markets

If farmers are to maintain their market access as individuals, an open market system and active competition for their products must be maintained. Farmers must have sufficient market intelligence in a form that serves their needs. Market practices must be open, fair, and nondiscriminatory by size of farmer. These needs, of course, are not new. Farmers have demanded helpful and protective market services for a half century. However, problems and situations change and continuing vigilance is necessary.

Market Disruptions

Other impediments in the market place also concern farmers. Some of them are of importance whether farmers seek market access as individuals or as groups. Protectionism in foreign trade policy amounts to denying farmers some access to markets. Interruptions of market flows by union labor are often of particular concern. Grain farmers sometimes feel the impacts of a dock strike upon their farm prices. Grape growers were even more directly affected when secondary boycotts at the retail level decreased the demand for grapes not picked by unionized farmworkers.

It is not necessary to judge the merits of the farm labor struggle to perceive the threat posed by a market-level boycott to even the many farmers who hire no labor. A secondary boycott can be much more damaging for fresh fruit and vegetable growers than for producers of other commodities. Feed grains and wheat are prime examples of commodities where such boycotts appear completely unworkable. Nevertheless, in some products labor problems can prevent farmer access to markets.

The policy problem of the labor boycott is delicate and even contradictory. If agriculture becomes owned and integrated by large corporations, public sympathy for "the farmer" (the corporation) will probably diminish. Farm labor unrest will become more common but the workers would be former independent farmers. *In this sense, the time-worn formula of farm organization teaming up with corporations against unions may need to be reexamined. The justifications for farmer group power are much the same as justifications for labor group power.*

Access as Groups

Farmers are giving increasing attention to obtaining market access via group action. While there are various ways in which group activity may proceed, much of the thinking has focused on either vertical integration through cooperatives or on horizontal bargaining associations.

These distinctions may appear to be somewhat artificial because bargaining associations may regard themselves as cooperatives and because traditional cooperative marketing agencies may vary greatly as to the amount of vertical integration that they seek. However, these distinctions between a vertical and a horizontal approach point up very real differences in the philosophy and approach of existing organizations.

Proprietorship Through Cooperatives

Cooperative marketing was once supported as a means of insuring active competition for farm products and of increasing, however modestly, the returns for these products. While these objectives of getting an extra dollar are still relevant, cooperatives have become more important as a means of preserving the operator's access to markets. Thus many farmers and farm leaders now point to the growing vertical integration in agriculture and urge farm cooperatives "to beat them to it" — "them" being the agribusiness corporations. The growth of the giant dairy cooperatives is a partial case in point.

How far forward should the co-ops integrate? Many proponents are pressing for cooperatives to go even further and to develop widely known brand names for processed foods complete with the advertising and merchandising to get good space on retail shelves. Much can be said for this head-on approach to the threats of vertical integration. One important limitation is that the capital and organizational requirements are often too large to be undertaken except by extremely strong cooperatives.

An alternative overall strategy is for farmers to turn to group bargaining as a replacement for the open market. Policy measures to implement this strategy would include enabling and regulatory legislation to define and normalize the group bargaining relationships within adequate safeguards for all parties including consumers. For example, procedures are needed for recognition of farmer bargaining associations and solution of jurisdictional disputes. Bargaining in good faith needs to be a legal requirement. Safeguards for the public are needed when sanctions are invoked by the bargaining parties.

The Bargaining Approach

The bargaining association, a relatively recent development, is generally unlike the cooperatives in that it is not involved in the "business of marketing products." Rather it represents producers in contractual negotiations over prices and other terms of trade.

Bargaining has been accepted in varying degrees by farm organizations but has been received rather coolly by much of the marketing cooperative movement. The bargaining assocation may be the only possible vehicle for group action for integrated farmers such as broiler growers. For livestock producers, who have some strong cooperatives but do not possess nearly the strength of the dairy group, a major policy question is whether they should try to achieve power through building up their marketing cooperatives, turn to bargaining associations, or use both approaches.

Bargaining Versus Big Cooperatives

Proponents of cooperatives sometimes argue that cooperatives are the most advantageous and perhaps the only effective way to bargain. *However, one of the most telling arguments for the bargaining association as against the vertical cooperative approach is that in many commodities the latter is simply unattainable within the relevant time span.* It will take too long to build the vast capital structure if a very solid base doesn't already exist.

If cooperatives get big enough to bargain, new problems arise. An urban reporter put one such problem this way:

"Some farmers complain, however, that the 'super co-ops' have become just another kind of conglomerate giant from which they get few benefits. For example, Sunkist Growers, Inc., which dominates 80 percent of California citrus, is a many-layered, pyramid-shaped corporation. Small growers are at the bottom. Contrary to general knowledge, the processors at the top of this 'super co-op' include major private corporations as well as farmer-owned processors. Critics contend that decisions are made and profits are taken at the top of the pyramid, with too little consideration paid to the economic interests of the small grower.

"Iowa farmer Weisshaar is not eager to have his interests buried in such co-ops. 'If I wanted to go into something like that,' he says, 'I would have gone into meat packing or the grocery business. I like being a farmer.' " *(2)*

Can Farmers Control Their Cooperatives?

Policy questions arise about the organization and control of cooperatives. When a cooperative becomes large enough to compete with the corporate giants, is it really responsive to farmers or is it beyond the farmers' capacity to control it? No simple answer is possible without a number of "It depends on. . . ." What about the large producers versus the small ones in such a cooperative? If a cooperative slugs it out with the giants, its emphasis may have to be upon volume, efficiency, and capital. Such concepts as one member, one vote or more emphasis upon people and service than upon volume may be lost in the competitive struggle. Breimyer expressed his concern about these problems: "Professionally managed by persons who frequently have no deep understanding of agriculture, cooperatives have sometimes not only virtually lost touch with their farmer members but have limited their membership arbitrarily, turned to volume voting, provided no procedure by which grievances of its members can be aired and adjudicated, or in other ways departed from the principles that underlay the cooperative movement several decades ago." *(1, p. 300)*

The Individual and the Group

In all group action, including bargaining associations as well as cooperatives, a timeless and universal problem emerges. Who checks the honesty of the metropolitan police? The old Romans asked: "Who guards the guards?" The ancients sought protection in tribes and then they had to develop cultural safeguards for the rights of individuals within the tribe. *Likewise modern farmers, who want to protect their business status via the cooperative, must give proper attention to the individual versus his group.*

Cooperatives in vertically integrated industries such as poultry will probably need contracts with their members. Policy choices here are (1) marketing contracts that preserve most of the entrepreneurship of the farmer and (2) production contracts that pass the decision-making and ownership to the cooperative. The difference in receiving a piece-wage from a cooperative or from a corporation is not immediately apparent. Members must honor their marketing agreements with their cooperatives and cooperatives must insist that they do so. Cooperative marketing can not progress if members avoid fulfilling their contracts whenever a changing market gives them the slightest of economic incentives.

Cooperatives face new and greatly enlarged opportunities and responsibilities in agricultural marketing. As their role becomes greatly enlarged, their structure and behavior become much more central to the welfare of consumers. *When a cooperative becomes farmers' only access to a market, then policy questions about its organization and control assume a far greater importance than*

when it was just another choice in an open market of many competing marketing firms.

Much of the pro and con discussion focuses upon the cooperatives because the pure bargaining associations operating without cooperative involvement have yet to prove themselves in the eyes of many farmers. Such associations have had limited successes in some areas but for most Midwesterners they probably do not compare with the accomplishments of the dairy cooperatives.

Government's Role

If farmers try to substitute group action for individual action in the market, they will need new legislation and new services from the government. For example, even though the sale of products has been replaced by the sale of farmer services in vertically integrated industries, public market news has failed to make the change. Market news persisted in reporting farm broiler prices after the market had disappeared rather than reporting the contractual terms received by growers. Market information about contractual terms is generally scarce although some bargaining organizations are beginning to provide such information. Nothing close to a perfect market can be expected for farmer services but better market information should improve what is now a very imperfect market.

Free markets, like free societies, require policing. The policing is aimed not only at stopping the dishonest but also at providing means of settling honest disputes. Extending such public policing to contractual integration has lagged. Recently increased scrutiny by the Packers and Stockyards Administration over various relationships between broiler integrators and farmers is a move to close that particular gap. The manifestly unequal bargaining power of the typical individual farmer as compared with the typical agribusiness integrator makes such policing especially important.

Marketing orders — a combined government-private form of group action — have helped to promote stability in markets that were formerly unstable. They appear to have been quite successful in milk and in many fruits and vegetables. Marketing orders in dairy have facilitated the bargaining power of the large cooperatives. We may expect attempts to extend marketing orders to other commodities in which more group action is desired. However, marketing orders will be of little or no assistance to farmers, such as broiler growers, who are selling their services rather than selling farm products to vertically integrated agribusinesses.

Group Conflicts

Jurisdictional disputes among farm organizations and cooperatives are already developing in certain commodity areas. At this stage such disputes, while unfortunate and a real threat to farmer success in bargaining, are probably inevitable. *Procedures that enable democratic choice by farmers within a context minimizing mutually destructive organizational battles should be legislated.* Torgerson argues that there are mutually supportive roles for both the cooperative and the farm organization to play in farm bargaining *(4)*.

Farm organizations deal with a market for their products that, in some instances, can disappear. The processor can choose to be the producer rather than the buyer. In principle, bargaining associations can meet this bypass by selling the services of farmer members rather than farm products, although most entrepreneurs mighr regard this alternative as second best. An organizatior that bargained for the sale of both farm products anc farm services could include proposed limits on thc amount of farm production by processors in its bargaining demands. Whether such a farm bargaining organization could maintain the internal unity essential to sucl two-fold bargaining is a serious question. Independen farmers currently show little tendency to accept an identity of their interests with those of vertically in tegrated farmers.

A Threat to Cooperatives?

Farmers may group together to help themselve through cooperatives or bargaining associations. Bu can large corporations — vertically integrated or cor glomerate — become members of these associations an take part as "farmers"? This is a troublesome and ver real policy issue. Various family farms have found useful to incorporate. Such farms are similar to othc farms in every other respect and family corporat farmers have long participated as members of cooperatives and bargaining associations. Thus it is difficult t say that all corporations are not farmers. On the othc hand, many of the antitrust and other protections an exemptions granted to farmers in the Capper-Volstea Act and in the Agricultural Marketing Act of 193 quite clearly would never have been granted to powerf corporations.

To the extent that the very strong can seize upon th exemptions and protections granted the weak, the pu poses and legitimacy of the exemptions and protectio are undermined. Farmers cannot afford such an unde mining of the rights granted to cooperatives if they are protect the access to their markets.

Which Way To Go?

What questions should farmers ask themselves? Sor of the appropriate questions have been raised abov

Some farmers may have value systems which definitely commit them to the individual open-market way, the cooperative way, or the bargaining-association route. If they do not, they may want to ask: For my particular commodity, which ways are really feasible? There may be two, one, or none, rather than three, feasible ways. Can an open-market individual access system be maintained? The dispersion of power in a dispersed agriculture is discussed in Chapter 2 and has much to recommend it to society. But will government protect dispersed agriculture from a corporate takeover, direct or integrative? Will farmers accept the discipline of a group approach? It is ironic that many turkey producers who voted against the discipline of a national turkey-marketing order soon found themselves under a greater discipline as integrated growers.

Other questions include: What is the present base in terms of cooperatives or bargaining groups? Which approach seems more likely to work for this commodity and this group of farmers? What will be the public's perception? Will giant bargaining associations or cooperatives be regarded any differently than giant corporations. Already some college students see "agriculture" as migrant workers being exploited by giant agribusiness corporations.

Almost inevitably, whether the route is individual or group, the bigs will have more power, exercise more leadership, and receive more benefits than the smalls. Yet it seems clear that young people are demanding more equality of opportunity and more "distributive justice" than did their elders. Thus any big disparity of wealth, income, and economic opportunity in agriculture may come under much more critical scrutiny in the future. Perhaps a little less concern with microefficiency and a little more concern about equality of opportunity will have to permeate the policies of all institutions in agriculture, including market institutions.

Some of the special problems of access to markets for integrated producers have been discussed. The markets for farmer services in raising broilers and turkeys and growing vegetables for processing are the most imperfect in agriculture. One cannot put one's services in a truck and ship them off to an alternative market when one is dissatisfied with the present buyer.

There have been reports of blacklists of farmers who are judged to be too interested in promoting competition for their integrated services. Vertical integration is assumed to be a one-way street. There is no turning back to an open market and independent production. Integrated farmers are prime candidates for bargaining associations as a means to redress the lopsided balance of power. However, the organization of economically weak individuals scattered across the nation is difficult. Moreover, a considerable number of small, independent farmers are ready to seek the security of contracts if given an opportunity by the integrators.

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6. POLICIES AFFECTING CAPITAL ACCUMULATION AND ORGANIZATIONAL STRUCTURE[1]

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Besides land, knowledge, and markets, a collection of other influences also affect the structure and control of agriculture. Risk and its abatement, the mystifying mixture of income tax rules and regulations, payment limits and small farm benefits in land retirement and direct payment programs, pollution control methods — all these have an actual or potential effect on the kind of farming system that will prevail in the future.

Political power and the use made of it by rural people may be the most powerful force of all in influencing policies that will affect capital accumulation, the organizational structure of agriculture, and the control of decision making. Although the tally of farm area Congressmen is down, the critically important urban vote is generally sympathetic to the problems of rural areas related to rural poverty and unemployment.

GOVERNMENTAL POLICIES AND PROGRAMS, as well as social forces, influence the changing organization of agricultural production. Such policies may be designed to influence the structure of agricultural production toward more dispersed organization or encourage more concentration of the producing units. They may do so by design or by unintended side effect. Policies discussed in this chapter are those related to risk reduction, federal income taxes, federal farm program payments, rural development, and pollution control.

Price, Income, and Natural Hazard Risks

Public policies that affect farmers' risk and uncertainty will influence the organizational structure of agriculture. "Farming is a risky business" is a statement often made and generally accepted. Risks include price fluctuation, uncertainties in farm input and product markets, income variability, and natural hazards such as adverse weather and insects and diseases affecting crops and livestock. Risk and uncertainty can influence the use of farm resources and how they are organized in the farming industry.

How to adjust to or offset risks has been an important consideration in the organizational structure of the farming sector. It has affected economic adjustments on farms and in the farm supply and market systems and it has brought about public policies and programs specifically designed to reduce risk.

The risks and uncertainties facing farm firms influence the allocation of resources within the firm and within the agricultural industry. They limit the availability and use of capital and credit, they restrict or distort the investment of capital for farm expansion, and they decrease the effectiveness of management.

Credit is restricted because of increasing risk. As a firm expands by using credit, the possibility of losing its equity becomes greater. Added uncertainty increases the probability of loss. This concept restricts borrowing by the expanding farmer and also lending by the credit agency. Higher risk may also encourage diversified ownership under a corporate structure. Potential loss can be spread over many owners.

Risk and uncertainty affect investment of capital, whether it is equity capital or credit. Expansion of farm size, specialization of farm enterprise, adoption of capital-using technology, and other resource adjustments are affected by risk. Reduction of risk encourages capital investment.

Management decisions may be more subject to error under conditions of higher risk and uncertainty. Greater uncertainty of output and prices leads to more management errors in predicting economic returns and may thus limit expansion of the farm business.

Economists are uncertain about whether reduction of risk helps large farms more than small ones. Policies that reduce risk and uncertainty will tend to encourage adjustments of agricultural resources toward larger farms, more rapid adoption of technology, and more specializa

[1] Contributing authors for this chapter were Paul H. Gessaman, University of Nebraska; Neil E. Harl, Iowa State University; James B. Johnson, United States Department of Agriculture; Everett E. Peterson, University of Nebraska; W. Fred Woods, Economic Research Service, United States Department of Agriculture.

ion of production. However, even though risk-reducing policies may make possible greater concentration of production, they may also tend to maintain production by maller units.

Reducing crop risks. The Federal Crop Insurance program is designed to reduce risk from crop losses. Private companies also supply crop insurance to reduce risks.

Farm price support programs have reduced risk and incertainty related to prices and income from production f major crops. Cropland diversion, acreage allotments, nd commodity storage have adjusted the supply to stabiize prices. Price support loans and commodity payments ave further stabilized prices and income. Commodity payments are based on normal production. Thus a farmer nay have a crop failure and still receive a significant part f his expected income. Farm programs, in effect, provide or forward pricing and income.

Reducing livestock risks. The dairy industry has price upports on manufacturing milk and federal market rders in major milksheds. These programs have a strong tabilizing effect on dairy prices and income. Price staility of other livestock enterprises is indirectly influenced y the stabilization of feed-grain prices and of the agriultural industry as a whole.

Farm size and program benefits. Price supports and ommodity payments have been based almost entirely on cres and output. The larger the farm and its output, the reater are the benefits of the income support programs n terms of dollars received. These program benefits reluce the risk of committing the resources of the expandng commercial farm operations.

As farms become larger and more commercialized, they ecome more sensitive to price fluctuation, especially price leclines. They use a higher proportion of capital to labor nd of variable capital to fixed capital. They also use nore purchased inputs and a lower proportion of farmroduced inputs such as operator labor and equity. Therefore they operate on a lower margin of return over irect costs per unit of sale. *Stable prices and forward ricing under farm programs are highly important for he large farms and their large commitment of resources.*

Resource values. Reducing risk and uncertainty under arm programs increases the value of the resources. Conequently, with lower risk, farm programs have conributed to rising land values.

Farm programs and price stability encourage investnent in output-increasing technology. The larger, exanding farmers are usually in an advantageous position o adopt technology. They also tend to set the price of and and rental rates. Thus land tends to be overpriced or the average and marginal farmers, which means they nay be economically excluded from farm expansion. Many smaller farmers become comparatively worse off s their costs rise but their gross income remains stable.

Government programs that reduce risk through stabilization of prices and income are available to all farmers. However, they appear to be of more economic benefit to the larger, expanding farm than to moderately sized and smaller farms.

Adjustments for Risk

The structure of today's agriculture and its related institutions has been influenced by risk and by adjustments to reduce risk. Government policies have had an effect on these developments.

Risk and concern about risk has influenced the degree of specialization as compared with diversification on individual farms. It affects the availability and sources of equity and debt capital for agriculture. Institutions such as commercial insurance and the futures market have been developed to reduce risk. Farm producers and supply or market firms have developed contractual arrangements to reduce, share, or transfer risk. Farm lease agreements have been adapted to sharing risks between farm operators and landlords. Income tax regulations and other laws affect the incidence of risk.

Although most of these arrangements are in the private sector of agriculture, public policies can influence their development and use. Large commercial or industrialized farms may have more ability to utilize various methods of reducing risk including the various private sources. These include easier access to capital sources, contractual arrangements, price stabilization, specialized insurance, and other approaches. *If the public wants to assist the dispersed type of farm in reducing risk, then public policies should continue to be made available and developed for the dispersed farms.*

Income Tax Policies

It has been argued that, at least theoretically, income tax policies should not influence economic decision-making. If the equitable generation of revenue is the only objective of an income tax system, an important criterion for evaluating a taxing system would be the absence of influence on economic decisions.

However, the income tax structure as part of national policy has become an important tool for influencing economic decision at least at the Federal level. In the past decade, many major income tax changes have been motivated by fiscal considerations, but income tax incentives have also become a means to aid programs for an improved environment, accelerated capital investments, and increased soil and water conservation.

The flexibility and universality of the income tax, as well as its inherent economic incentives and disincentives, commend income tax as a key policy variable. Thus the

income tax framework appears destined to serve multiple masters with relatively frequent and substantial changes in prospect.

Analyzing Income Tax Preferences

It is almost an article of faith in some circles that income tax policy has systematically favored large-scale firms over small firms, particularly in agriculture. Substantially greater analysis is required before conclusions may be drawn as to the direction and magnitude of tax preferences.

The size and scale of firms are seldom important variables in the imposition of the income tax. Although size and scale have economic significance for legal or tax purposes, the terms are generally not sufficiently precise to serve as touchstones for regulation or taxation. Rather, legal and tax rules have been based upon such variables as (1) method of firm organization (regular or Subchapter S corporation, general or limited partnership, simple or complex trust, or sole proprietorship); (2) type of income involved (ordinary income, capital gains, or tax-free income); (3) level of income involved (graduated rate for sole proprietors, partners, trust beneficiaries, and shareholders in a Subchapter S or tax option corporation, but a two-step rate for regularly taxed corporation); and (4) occupation of the taxpayer (for example, farmers as taxpayers enjoy certain special privileges such as cash basis accounting). Any determination of tax preferences requires specific assumptions about all four variables.

To say that large-scale farms have tax advantages not enjoyed by smaller firms has meaning only if method of organization, scale (gross sales, net income, acreage), nature of the income mix, and level of taxable income is also specified. Without these additions the statement that large farms have advantages not enjoyed by small farms is meaningless. The statement invites the question: Tax advantages compared to what? Although no unequivocal answer may be given to questions about tax advantages for large or small firms, the relevant variables are discussed below.

Capital Gains Versus Ordinary Income

Although heavily criticized in recent years, the capital gains-ordinary income dichotomy is well established in tax policy and will probably continue to exist for some time. The capital gains concept is responsible for many tax-avoidance or tax-minimization efforts as taxpayers at all income levels try to have income taxed at the preferential capital gains rates.

Capital gains treatment. The preferential treatment of capital gains income, which is widely known, applies to individual taxpayers of all income levels. But individual taxpayers in the higher income brackets receive the greatest relative benefit. Basically, capital gains are taxed in one of two ways and the taxpayer makes the choice. The entire capital gain may be taxed at a flat rate (25 percent on the first $50,000 of gain, 35 percent on all over $50,000), or 50 percent of the gain may be deducted with the other 50 percent taxed as ordinary income on a graduated scale. Obviously, few high-income-bracket taxpayers elect the 50-percent deduction and few low-income-bracket taxpayers elect the flat rate tax. Persons in a partnership, Subchaper S corporation shareholders, and trust beneficiaries all utilize the rules for individual taxpayers.

Regularly taxed corporations handle capital gains quite differently. Capital gains income is not eligible for the 50-percent deduction alternative. Corporate capital gains are taxed at flat rates of either 22 percent (if the corporation otherwise pays tax at the 22-percent rate) or 30 percent. Corporations make relatively poor organizational devices if the objective is minimization of tax from capital gains.

Income eligible for capital gains treatment. For farmers and farm investors, the major assets normally receiving capital-gains treatment include farmland and buildings, machinery, breeding stock, and dairy animals. Other assets, such as grain, hogs produced for market, and feeder cattle generate ordinary income which is fully taxable at regular income tax rates.

A substantial incentive has existed, particularly for high-tax-bracket individuals, to invest in assets producing capital gains rather than ordinary income. The incentive has been even greater for depreciable assets eligible for capital-gains treatment such as buildings and breeding herds. Depreciation is deductible from ordinary income and, in effect, creates additional capital gains taxed at a lower rate.

To lessen the incentives inherent in such tax policy, the Congress has taken several steps in the past decade to "recapture" gains representing depreciation previously claimed as ordinary income. In 1962, rules were imposed for recapturing gains on sale of personal property (except livestock). The concept was extended to depreciable real property in 1964.

In a specific effort to reach "tax-loss farming," Congress in 1969 moved in additional directions to lessen the incentive to convert deductions from ordinary income into capital gain at a later time. These included (1) recapture of depreciation on livestock, (2) recapture of soil and water conservation and land-clearing expenses, and (3) creation of an Excess Deductions Account converting capital gain into ordinary income on sale of certain typ

of farm property if the sale had been preceded by operating losses.

Despite efforts at limiting the conversion of ordinary income deductions into eventual capital gains, a relative advantage still exists for high-income individuals to report gains as capital gains where possible. The same basic rules for reporting capital gains can be used by lower-income individuals. The advantage is inherent in the capital-gains concept.

Tax Rates

The rates of income tax imposed on capital for expansion can have an important competitive effect on firms in the expansion phase of their life cycle. Essentially, the differential tax rates may be explained by (1) the type of taxpayer (individual, partnership, or corporation) and (2) the tax bracket of the particular taxpayer.

Marginal rates of tax vary sharply, from 14 percent federal income tax for low-tax-bracket individuals through a graduated tax of 70 percent for high-tax-bracket individuals (50 percent on earned income). These rates apply to individual taxpayers, partners in a general or limited partnership, and shareholders in a tax-option or a Subchapter S corporation. These taxpayers are viewed as ultimate consumers of taxable income.

By contrast, a regularly taxed corporation pays federal income tax at a 22-percent rate for up to $25,000 of corporate taxable income and 48 percent above that level.

These rates may appear to be more or less advantageous than the tax rates for individuals, depending upon the relevant tax rate. A 14-percent-tax-bracket individual has nothing to gain (and in fact may pay more tax) if part of his income is taxed as a regularly taxed corporation. A 50-percent-tax-bracket individual, on the other hand, may obtain a substantial income tax advantage by creating a new 22-percent-tax-bracket corporation to which a part of his income would be taxed. At least the advantage is clear if the income is destined for expansion of the firm.

Any advantage of the corporation in terms of more after-tax dollars for expansion is tempered by imposition of a second tax as corporate income is ultimately distributed to shareholders. Either a tax on dividend income or a tax on liquidation distributions ultimately awaits the shareholder of an expanding corporation unless he is willing for corporate income to be used for expansion.

Cash Versus Accrual

Although farming would seem to require accrual accounting under the universal test of whether inventories affect income materially, farm taxpayers of all types using various methods of organization have been permitted to report income using the cash method. In part, such use of cash accounting constituted recognition of the limited capabilities of accounting systems used by farmers. Despite improvements in record keeping and attainment of a high degree of accounting sophistication by some farmers, particularly those making use of computerized accounting methods, the cash reporting option has continued to be used.

With cash accounting, farm taxpayers enjoy substantial advantages over accrual taxpayers. One advantage is that increases in inventory are not subject to income tax. Gain on assets is recognized only when items are sold. This permits buildup of inventories without the necessity of tax payment. If the increased inventory, such as from a beef-cow herd, is held by an individual taxpayer until his death, no income tax is ever paid on the gain involved. A second advantage is that on sale of raised breeding animals the entire selling price is treated as a capital gain if held for 24 months. For accrual taxpayers, only the excess over the last inventory value is eligible for capital gains treatment.

Special deductions. Some rules for income tax deductions peculiar to farmers make no distinction as to size or scale of the taxpayer. These include the opportunity to deduct rather than amortize expenditures for fertilizer and lime, to report commodity credit loans as income when a loan is received or when the crop is sold, to deduct soil and water conservation expenditures rather than adding such expense to the tax investment in the land, and to file estimated tax returns (not required if return filed by March 1).

Other provisions uniquely applicable to farmers favor those with lower-incomes. For example, expenses incurred for clearing land to make it suitable for use in farming may be deducted currently rather than being added to the basis of the land. However, current deductions are limited to $5,000 or to 25 percent of taxable income from farming, whichever is less. This provision reduces tax benefits of rapid land clearing by farmers with taxable income of $20,000 or more per year.

Effect of Death of Individual on Accrued Gain

Under current law, a substantial income tax incentive encourages individuals to retain ownership of heavily appreciated property until death. Upon the death of a property owner, the income tax basis for property held becomes equal to fair market value as of the date of death or as of the ultimate valuation date up to six months after death. The result is that the tax on the potential capital gain in the property is eliminated.

This feature of income tax law has been criticized as inequitable and as favoring principally shareholders and landowners. Repeal has been urged in recent years.

In addition to eliminating income tax on appreciated property held until death, this income tax provision discourages lifetime gifts of heavily appreciated property (with gifts, the donor's income tax basis carries over to the recipient) and encourages high valuation of property at death, if the estate tax is small or does not apply.

This feature of current income tax law often affects corporations less favorably. At the death of a shareholder, his stock receives a new income tax basis and the accrued gain in the stock is eliminated. However, the property underlying the stock — owned by the corporation — is unaffected by the death of a shareholder. Thus the advantages of a "new depreciation start" and no gain or little gain on post-death sales are not similarly available for corporate asset ownership as they are for individuals.

If all "individuals" engaged in farming were individuals, at low-income levels, and receiving only ordinary income, it would be a relatively simple task to compare their tax burden with nonfarm investors operating as corporations, at high-income levels, and receiving only capital gains income. Obviously, such is not the case. As the assumptions mentioned above are relaxed, generalizations as to the relative income tax burden become less and less meaningful.

Farm Program Payment Limits and Small-Farm Benefits

The scale of annual federal farm program payments indicates that allocation of these funds may have a significant impact on the organizational structure of agriculture. Direct program payments to farmers have been over three billion dollars annually during recent years. Allocation of these funds can aid or hinder whatever public policy objectives the nation might have regarding the organizational structure of agriculture. For example, limits on the size of payments to larger farms and special concessions to smaller farms would tend to strengthen a dispersed agriculture rather than encourage a concentrated agriculture.

Payment Limits

Public support for farm programs over the years has been in part based on the concept of helping the "average" farmers maintain adequate income. Limitations of payments to large producers have been debated periodically since the 1930's. Statutory or administrative limits on the size of Agricultural Conservation Program (ACP) payments (now REAP payments) have been in effect from time to time. Currently the limit is $2,500 to any one individual. Payment limitations were a part of the Soil Bank Program of the 1950's and the Cropland Conservation Program of the 1960's.

During the 1960's, federal farm programs shifted to more direct payments to adjust crop output and to maintain grain and cotton producers' incomes under lower price support levels. The very large payments to some large-scale farm operations resulted in public criticism and support for payment limits.

A limit of $55,000 per program to persons participating in either the cotton, feed-grain, or wheat programs was included in the Agricultural Act of 1970. In 1970, 1,232 persons received payments in excess of this amount. Most of these were earned for participation in the cotton program. Very few persons are subject to the limitation under two or more programs. In 1971, only 466 producers had payments reduced to the $55,000 limit.

These program payment limits have not had the economic effects that some may have envisioned. Large-scale farmers have been able to restructure their operations so as to minimize the adverse effect of payment limits. Some common restructuring steps have included subdivision of large farms, leasing of parts of crop allotments for cash rent, and formation of partnerships.

Farm programs oriented primarily toward cropland diversion and supply adjustment through incentive payments must include participation of most commercial farmers to achieve their objective. Therefore, at some lower level payment limits may conflict with the major objective of supply adjustment.

If the policy objective is to maintain a dispersed agriculture, then program payment limits could be designed with that purpose in mind. Proposals on limits have included $20,000 per farm, $10,000 per program per farm, and other variations lower than present programs. Restriction on the permitted restructuring mentioned above would impose further limits. Program payments tied to land-use policy could be designed to discourage very large farms and to encourage less intensive use of cropland.

The present program, with payments based on commodity output and high limits per farm, tends to encourage the trend toward larger farms. The public, through Congress, needs to decide on its policy goals related to the organizational structure of agriculture and then decide whether program payments are to be used toward achieving those policy goals.

Small-Farm Benefits

Under present programs, the stabilization of farm price benefits nearly all farmers. The direct payments under commodity programs benefit farmers in proportion to output. Farmers with low-volume commodity production receive small payments. For example, in a recent year 7

percent of producers receiving payments received less than $1,000 each, or 21 percent of total payments to all farmers.

Some of the commodity programs of the 1960's provided special treatment for farmers with small allotments. The Agricultural Act of 1970, however, contained a small-farm provision only for cotton. Small-farm provisions will probably not figure prominently in future farm commodity programs because commodity programs are not highly effective in helping small, low-volume farmers.

Providing adequate family income is the major problem facing many low-income farm families. Some are helped through general public-assistance or welfare programs. Many small, low-volume farmers have off-farm employment to provide adequate income. However, in some rural areas these opportunities are limited.

Policy proposals have included providing direct income payments to low-income farm families. These payments may not be related to farm commodity production but they would bring family income up to some minimum level. Such payments could be further adjusted to provide income payments only to older farmers who have little opportunity for other employment. This would overcome the objection of payments being used to perpetuate uneconomic farm units.

Policies and programs could be designed to help maintain small farm units. Such programs would help keep people in rural areas but also might keep some families in lower incomes than they could earn elsewhere in the economy. However, small farmers produce a relatively small share of the nation's farm output and this approach may be of limited importance in influencing the overall organizational structure of agriculture. Policy decisions need to consider alternative approaches to helping low-income farm families in the context of how they might relate to the future structure of agriculture.

Pollution Control

Several types of potential or existing agricultural pollution have been identified including crop residues, soil sedimentation, and livestock wastes. Excessive use of chemicals and fertilizers in crop production is one source of pollution. Livestock wastes are a more serious source of pollution because of the expansion of larger confined feeding operations. The public is becoming increasingly concerned about this kind of pollution. Federal and state policies are being proposed and developed for pollution control.

Current attention from various government regulatory agencies is focused on livestock-waste pollution abatement, primarily because confined feeding operations are considered potential sources of pollution amenable to control.

Policies vary among states in the North Central Region. Water-quality regulations often apply to livestock operations even though they are not specifically mentioned. Iowa, Indiana, Minnesota, Kansas, and Nebraska have passed legislation that requires certain classes of livestock operations to register with state regulatory agencies. Registration entails providing a detailed breakdown of current and proposed operations including the number and type of livestock confined and the location relative to any watercourse that is receiving or can receive livestock waste runoff. An Ohio solid-wastes law specifically includes agricultural wastes but has been interpreted to exclude the typical small-farm operations and to presently include only large-scale livestock operations. Other states are proposing statutes that will enable a direct approach to livestock-waste pollution problems.

Implications for Livestock Operations

Current regulations and registry requirements focus on larger-capacity livestock operations. Agronomic research suggests that large livestock operations that assimilate large volumes of feedstuffs on limited land bases create a plant nutrient-land base imbalance. The Environmental Protection Agency also recognizes that waste-handling problems become progressively greater as feedlot size increases.

The large-scale enterprise is still a minor part of the livestock industry in the North Central Region. In 1970, over 75 percent of the Region's fed beef was marketed from lots with less than 1,000-head capacities. In 1964, less than 10 percent of the dairy herds had 50 cows or more. However, the larger enterprises are increasing in number.

Recognition of the diversity of firm sizes within the Region's livestock industry is necessary when considering alternative methods of pollution control. Suitable methods of abatement may vary directly with firm size and factors related to firm size such as land availability, livestock buildings, and handling facilities. Under current regulations, additional variable costs attributable to waste abatement have not seriously affected the viability of any particular size of firm or placed producers within a particular state at a competitive disadvantage. In fact, certain producers have qualified for ASCS cost-share monies to offset a portion of the capital outlay necessary for the acquisition and installation of retention structures and manure storage facilities.

However, the enforcement of more stringent regulations that do not distinguish among firm sizes and their associated resource bases could impair the viability of certain sizes of livestock firms in certain production areas. For example, if some type of complete solid-waste treatment

system were required, the initial capital outlay may be a prohibitive cost to 500-head beef-feeding operations. But it may be economically feasible for a 20,000-head operation.

Another consideration is a possible difference among states on pollution-control policies. An added cost to comply with regulations in one state that do not apply in other states would place those livestock producers subject to regulations at an economic disadvantage. This may indicate a need for federal guidelines on policies affecting livestock producers. Such federal guidelines, which would be primarily applicable to large-scale livestock enterprises, are now under joint consideration by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency.

There seems to be general agreement that policies may be needed for control of pollution from livestock wastes. As policies are developed, recognition needs to be given to their impact on size of the livestock operation and on enterprises in different states or locations.

Rural Development Policies

Rural development has gained prominence in recent years as increasing attention has been directed to the problems of the rural areas of our nation.

Rural development policies are primarily concerned with improving employment opportunities, incomes, and the quality of life in rural areas. *This section will be restricted to rural development policies that are activated or made effective by group or community decisions.*

Employment and income opportunities are usually tied closely to industrial development. Quality of life factors, on the other hand, are usually linked to the availability and accessability of public services and to environmental quality.

Coherent national policies on rural development have not yet been activated. Numerous programs of limited scope have been offered, but these have not made possible the development of "... a sound balance between rural and urban America"[2] which has been a continuing goal and to which Congress committed itself in the Agricultural Act of 1970.

Consequently, communities have experienced widely varying success in rural development efforts to date. Some have made substantial development progress while others have not only failed to develop but have declined — sometimes rapidly. Nevertheless, community development programs of various kinds will continue, and they will have effects upon the agriculture which they touch.

[2] Section 901 (a), Title IX, Agricultural Act of 1970.

Impact on Agriculture

Effective rural development policies resulting in off-farm employment opportunities would make possible the continued existence of dispersed agriculture which is not, of itself, economically viable. Farmers could combine part-time farming with nonfarm employment and maintain their rural residence. In the short run this could and probably would, slow farm consolidation. However in the longer run these noneconomic units might be combined by rental arrangements into larger units built up of small rental parcels, thus leading to concentration of production under tenant arrangements.

If improved employment opportunities resulted in substantial in-migration of workers, all of agriculture would benefit from more accessible markets for inputs, improved viability of social and economic institutions, and possibly improved markets. Increased competition for factors of production and possible conflicts in land use, and a fairly high rate of social and economic change, would almost certainly accompany this type of rural development.

Changes in the structure of institutional arrangements of support organizations such as Extension Service, Soil Conservation Service, the land-grant college system, ASCS, and others affected by revenue sharing and governmental reorganization could substantially alter the viability of dispersed commercial agriculture. Such changes would probably lead to increased concentration in agriculture if the resulting changes interrupted the flow of information, funds, and technical assistance to the small and average sized farms, thus weakening the competitive position of these units. Larger concentrated units could probably more successfully secure these services from alternative sources and thus would be more successful in adapting to changing conditions. Rural development credit policies having substantial import on credit availability, could have similar affects.

Better public services and facilities combined with more equitable participation by rural communities in federal grant and loan programs should lessen the disparity between opportunities and amenities in rural and urban areas.

To some degree all these policies would add somewhat to the viability of a dispersed agriculture. Yet it is also time that some of the benefits of a rural development credit package would be capitalized into land values requiring more financing for entry into farming than is presently the case, thus weakening or reducing the long run viability of dispersed agriculture.

Dilution of farmers' role. In many areas effective rural development would accelerate the urbanization of the countryside. In so doing, it would provide an adequate population base upon which many amenities and services

an be provided. However, increased rural population will esult in competition for resources, conflicts in land use, he dilution of political power of those engaged in agriulture, and demise of many social structures and institu-ons held over from the "good old days" of the past.

Environmental policies. Environmental control will be-ome an increasing part of rural development. Will the ooperation and conformity to rules that will be necessary ave different impacts upon one kind of agriculture than nother? The answer depends on the participation and daptability of a dispersed agriculture. If that kind of griculture cannot, or will not, participate, the advantage ill go to a concentrated agriculture. For the latter, by s internal administrative mechanism, is comparatively ell equipped to accept and enforce practices that will rotect the environment. More information on livestock ollution is presented above.

Rural Development in Perspective

Rural development and a viable dispersed agriculture an supplement each other. Employment opportunities ould give small farmers more options, such as part-time rming or taking full-time off-farm employment. Farmers ay have improved access to farm inputs, including sup-lies, services, credit, and labor, as well as to improved arketing services. These factors would help many farm-s adjust to the changing progressive economy. On the her hand, some of the social discipline involved in com-unity development, particularly in environmental pro-ction, will present a challenge to a dispersed agriculture nd might prove better adaptable to a concentrated agri-lture.

olitical Power and Its Use

Public policy is the product of political activity by the any groups in our society with political influence. Be-use of conflicting goals among interest groups, public olicy decision-making almost invariably requires com-omise. Use of political power by farmers and other ncerned groups determines which public policies affect-g agriculture are selected and how programs are ad-inistered. Agriculture's political power structure evolved er the years to support policies and programs that cilitated the industrialization of agriculture and pro-cted the economic interests of commercial farmers. ntil recently, agricultural policy and programs have nphasized and rewarded efficient production with little ncern for the "people left behind" or for those who igrated to urban areas.

The Political Power Structure of Agriculture

Agriculture's political establishment includes farmers and their general and commodity organizations, agriculture committees of the Congress, the U.S. Department of Agriculture and its related organizations, land-grant colleges and universities, and agribusiness-input suppliers, marketing firms, and bankers. These diverse groups do not agree on all agricultural policy issues. For example, input suppliers and marketing firms tend to favor high-volume production while farmers accept restrictions on production for better prices and incomes. However, alliances and coalitions are formed to work toward common policy goals.

Major federal farm programs resulting from agriculture's political activity are research and education, soil and water conservation and development, credit, rural electrification, market regulation, and programs for farm homemakers and rural youth. Benefits from these programs have accrued mainly to commercial farmers as would be expected from the composition of agriculture's political power base. These programs help make it possible for consumers to enjoy an abundant supply of nutritious, relatively low-cost food. Young people, raised and educated by rural families, are a subsidy-in-reverse to urban areas exceeding in value the cost of all federal farm programs since their inception.

Other programs administered by the USDA, such as food-stamp programs, meat inspection and grading, regulation of pesticide and hormone residues in food, and maintenance of the national forests primarily benefit non-farm people. Although farm leaders may protest that the cost of these programs is regarded erroneously by many people as benefits to farmers, programs mainly for farmers gain more political support when consumer programs are usually included in the farm legislation package. Agriculture's political power might be weakened seriously by transfer of these consumer programs to other federal agencies or by a government reorganization that would remove certain functions from the USDA.

Sources of Power

Agriculture will retain considerable political strength from its traditional sources in future agricultural policy development, but the old power structure will not be able to function as it did in the past. The economic, social, and political environment is constantly changing. Stability will be as abnormal in the next 100 years as in the past century. Some of the old attitudes, ideologies, and institutions have outlived their usefulness. Agricultural leadership needs to adjust to the political realities of the 1970's or suffer further loss of support. Major obstacles to

change are prejudice, indifference, ignorance, lack of initiative, and fear of the unknown.

Political power in the United States is largely based on people and property. Farmers have a relatively smaller political power base as our economy grows. Our population is now more than 95 percent nonfarm and will become even more concentrated in large metropolitan areas unless this trend is reversed by massive relocation and dispersion efforts. Reapportionment of the Congress and state legislatures according to the one man one vote principle shifts political strength to cities and suburbs after each population census. Rural domination of state and local governments will soon be gone as it is already at the national level. Few strategic positions in Congress are presently held by respresentatives from predominantly rural districts and few such districts remain. Executive power has increased relative to that of Congress. At times the Office of Management and Budget (formerly the Bureau of the Budget) seems to have more influence on farm program administration than does the Secretary of Agriculture.

Commercialization of agriculture — the end result of individual farmers' decisions, application of technology, and past public policies for agriculture — assures an abundant supply of low-cost food to American consumers which is taken for granted. But most urban people agree that farmers are entitled to fair returns for their labor, management, and investment. Reports by Presidential commissions, television documentaries, and magazines and newspapers have focused public attention on malnutrition, rural poverty, and the plight of the migrant farm worker. Critical publicity about the high percentage of farm program payments made to larger commercial farmers, however justified on other grounds, may divert attention from the fact that programs based on commodities and land cannot also solve problems of malnutrition, rural poverty, and declining small towns. High incomes on commercial farms no longer assure prosperous rural communities with even minimally adequate private and public services.

Changing Policy Issues

The political, social, and economic climate is such that urgent and reasonable public policy goals of other rural people must be recognized even though such goals may be inconsistent with those of commercial farmers and agribusiness.

Commodity programs will continue for several years provided that farmers do not press for changes that significantly increase government costs. Agricultural credit programs will be modified and improved to serve the financial needs of modern agriculture better. Farmers will be encouraged to bargain collectively for better terms in buying and selling. Agricultural trade policy will emphasize more aggressive efforts to maintain and expand commercial exports of farm products so that the U.S. may no longer play the role of residual supplier to the world.

Policies and programs to improve the quality of rural life will finally be separated from commercial farm policy. Rural people will participate more fully in programs to provide better housing, community facilities, health services, education, employment opportunities, and a minimum family income. The economic and social condition of hired farm workers, especially migrant labor, will improve because urban and labor representatives in Congress have the political power to extend protection of labor legislation to farm workers.

Other policy issues affecting farmers, but of even more concern to all people, and already on the legislative, executive, and judicial agenda of national, state, and local governments include food and nutrition programs, soil and water conservation, control of air and water pollution, protection of wildlife, and expanding demand for recreational facilities and space for living.

Decisions made on these public policy issues through our political process, along with private decisions, will have much to do with "who will control U.S. agriculture." The decentralized structure of political power can be used by rural people to achieve their goals. Current pressures and the fluid political situation provide the opportunity to develop effective, responsible public policies for rural America with broad-based support. The price of political support is political participation. Farmers and other people must become more actively involved in politics if they are to gain enough political power as a minority group to have any significant influence on public policy.

7. CONTROL OF AGRICULTURE IN PERSPECTIVE—A SUMMARY

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This brief chapter brings together the highlights of previous chapters. The authors emphasize that unless present policies are substantially changed, the forces now in motion in agriculture will continue. They point out again that a more concentrated agriculture would conform to farmers' desires for more security and less risk but would also conflict with their wishes for proprietary independence. Policy choices still remain open that would assist in maintaining some dispersion of farm production in those areas where dispersion still exists. Farm operators, input suppliers, and marketing agencies that favor traditional dispersed agriculture should focus their efforts on maintaining and encouraging such policies.

MANY FARM OPERATORS are expressing increasing concern over the possible future direction of agriculture. Their concerns are primarily related to what might be classed as (1) the rapidly increasing size of farms and (2) the pressure for coordination of agricultural production by forces outside of farming. Naturally technological developments have influenced both these developments. The authors of this publication have listed and described how various factors have influenced and are influencing the production, processing, marketing, and distribution of food and fiber.

Pressure for Increased Size and Coordination

Farm operators would undoubtedly be concerned with just the trend toward increased farm size even if there were no pressures for increased coordination from outside agriculture. Similarly, they would be concerned with the pressure for increased coordination of production with other steps in the food chain even if there were no increases in farm size. However, producers are faced with a combination of these two developments.

To sort out all the factors and their direct impact on either increasing farm size or increased pressure for coordination is probably impossible. However, an attempt should be made to separate those factors that have contributed primarily to farm size and those that have contributed to pressure for total production-marketing coordination.

Contributions to Increased Farm Size

While the labor force per farm has remained essentially the same, productivity per worker has increased substantially. This has come about through the use of larger machines, higher-yielding crop varieties, and increased efficiencies in animal production. All these developments have permitted the farm operator with sufficient management capability to obtain access to adequate capital and information to continually increase the size and scope of his operation. As a result of the combination of factors, productivity per worker in agriculture has increased 200 percent since 1950. This has often occurred at the expense of the smaller farm operators who, without sufficient capital and management capacity, have found off-farm opportunities more desirable than remaining on their farms.

Production-Marketing Coordination

The willingness of some producers to become part of an integrated production-processing-marketing system has also contributed to increased farm size in producing some commodities. The dominance of large-scale units in certain commodities and the trend toward increased farm size is discussed in Chapter 1. While concentration of production on large units is not uniform by type of farm or by area, the trend toward large-scale units is evident almost universally. More than half the farms in California, Arizona, and Florida have sales of $100,000 or more. More than three-fourths of vegetables, potatoes,

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and sugar beets are produced on a few thousand farms. Poultry production and cattle feeding are other enterprises with recent trends toward large-scale units controlling or producing a high percentage of the total output.

A Dispersed or Concentrated Agriculture

A further idea of what is occurring in agriculture may be expressed by moving from a dispersed to a more concentrated agriculture. This is a movement from a situation with a large number of relatively small proprietary units to a situation where decision rests in relatively few hands. Dispersion and concentration in agriculture may take several forms. For example, a concentrated agriculture leaves little room for the proprietary owner-operated farm. Any kind of concentrated agriculture has different implications for producers, for firms supplying inputs, for firms marketing products, and for consumers than does a dispersed agriculture.

The authors in Chapter 2 list six reasons why the traditional dispersed organization of agriculture is threatened. These are:

- The increasing technical complexity of farming.
- Persistent pressure for volume production.
- The scarcity of land, coupled with growing needs for land for purposes other than farming.
- The effect of tax laws and rules making it relatively easy for nonfarm investors to outbid farmers for land.
- The minority position of farmers.
- The pressure put upon farmers to become a subsidiary unit in larger business organizations, themselves often built upon merchandising strategy.

As agriculture moves increasingly toward a more concentrated structure, the specific interests of various groups become more clearly defined. For example, there are now specific classes of hired farm laborers, tenant operators, marketers, and input suppliers to serve the specific needs of large agricultural production units.

The public, which both consumes farm products and finances farm programs, seems concerned with two major issues. These are (1) a desire for wholesome, nutritious, safe food at relatively low cost and (2) a concern for long-term goals such as conservation of land, and a respect for farmers' aspirations for both acceptable income and proprietary status. In many areas conflicts arise between those who want to maintain more dispersed production and those who favor greater concentration.

Inputs in Agricultural Production and Marketing

Accessibility to land is basic to the production of most agricultural commodities. Basic U.S. land development and settlement policies and programs have been and are instrumental in getting land into a large number of small holdings as opposed to large individually owned tracts. This, in essence, gave rise to a dispersed agriculture. While dispersion continues to be a basic national policy, recent developments in the formation of corporations and changes in income tax laws seem to thwart this policy.

However, this basic policy has probably tended to keep farm size down with the exception of some large outside investments, both private and corporate. Large areas of undeveloped agricultural land are no longer available and the past and present ownership patterns make it difficult to assemble large tracts of land for extensive agricultural operations. In the future, keen competition for land suitable for agricultural production will probably continue.

Access to research and new knowledge is important to the maintenance of a dispersed agriculture. Limiting the availability of research to only a few provides them with a decided competitive advantage.

The basis for a smoothly functioning dispersed agriculture is accurate and timely dissemination of price information for products and inputs. In a concentrated agriculture, market knowledge tends to become more limited and the advantage of accurate and complete market knowledge rests with larger, more strongly financed operations that can gather and develop their own product market grades and prices. Past policy has been for a publicly supported market news and information service to inform buyers and sellers of market conditions and prices. The more concentrated agriculture becomes, the more difficult it is to collect and supply this information.

Capital is an important and necessary input to agriculture. Access to capital by all size units is important to maintaining a dispersed agriculture. Making available credit or capital to only larger-sized units would be a distinct advantage to them. However, the presently wide range of available credit sources to all size units generally makes adequate capital available throughout agriculture.

In the dispersed-type agriculture, which we have had in the past, producers have been encouraged by various means, legislative and other, to organize for group action. These activities have resulted in the formation of banks, purchasing co-ops, marketing co-ops, bargaining associations, and service cooperatives. This policy will

probably continue unabated as long as agriculture remains dispersed. However, a decided movement toward a much more concentrated agriculture would probably result in many of these organizations coming under increased regulation or supervision.

This movement toward a concentrated agriculture results in hired labor becoming an increasingly important factor. Such items as minimum wages, employee safety, labor-management relations, and work disruptions all become factors that must be considered. Increased labor costs tend to reduce some of the possible advantages of a concentrated agriculture because hired farm labor is of less importance as a factor in a dispersed agriculture.

Taxes and Capital Acquisition

Numerous other policies have an influence on the movement of agriculture toward a dispersed or more concentrated type of structural arrangement. Income tax policies, the handling of capital gains and investment credit, the attractiveness of agriculture to outside capital, the effect of tax programs for farm expansion, and land reclamation or improvement all have their effect. In addition, policies that tend to reduce risks from price fluctuations, income maintenance, crop insurance, government program payment limitations, small-farm benefits, pollution-control programs, and off-farm employment opportunities have some bearing on the movement toward a more dispersed or a more concentrated agriculture. These factors and their possible consequences and influences are discussed in Chapter 6.

Access to Markets

Agriculture is becoming influenced and pressured by a market-oriented system. For many commodities, it is necessary to have prearranged access to markets for products before they are produced. As long as agriculture was basically dispersed, having access to markets was of little consequence because there were always buyers for the output of the many small production units. This type of production system gave rise to a widely dispersed marketing system accessible to all producers. Large central markets also developed as in the case of livestock, fruits and vegetables, and grains which were easily serviced in terms of regulating practices, in collection and dissemination of information, and in assuring access to all producers.

As agriculture becomes more concentrated and as farm units become larger, and as agribusiness firms become more specific and assertive in their market requirements, accessibility to markets becomes increasingly important. Two options that farmers have relative to marketing in the future are discussed in Chapter 5. These are (1) to preserve access as individuals in an open market system or (2) to seek protected market access through group actions.

It is noted that if farmers are to protect their future as individuals, they must (1) prevent vertical integration, (2) keep corporations from farming, (3) maintain openly competitive markets, and (4) avoid disruptions by labor disputes. In addition, farmers must avail themselves of sufficient market intelligence in a form that serves their need and markets must be open, fair, and nondiscriminatory by size of producer and provide for sufficient policing to maintain competitiveness and provide a means of settling disputes.

The second alternative that farmers may pursue to maintain access to markets is by group actions in either of two ways. These are (1) vertical integration through cooperatives or (2) horizontal bargaining associations. In essence, the overall strategy here is for farmers to turn to group action as a replacement for the open market. Producers would, through various arrangements, relinquish their individual rights to arrange for sale to cooperatives or bargain through bargaining associations. In a concentrated agriculture where the cooperative or bargaining association became the producer's only access to market there would probably be some type of government regulation with respect to pricing practices and policies.

Producers may want to explore various other alternative methods of marketing and pricing that incorporate elements of both open and cooperative marketing and pricing systems. These might include such modifications as a market for long-term production contracts, a marketing board, or an auction-type centralized exchange.

Security or Independence?

The movement from a dispersed to a more concentrated agriculture would generally conform to farmers' desires for more security and less risk. On the other hand, such an agriculture would conflict with their wishes for a proprietory independence. Farmers who are adverse to group actions would not welcome the pressure they would eventually feel from bargining associations or unions. This pressure would tarnish farmers' cherished principle that given equal opportunity and a fair, honest market system, they can earn their reward. A concentrated agriculture would almost certainly reduce the quality of opportunity further.

Unless present policies are substantially altered, *very few logical reasons can be advanced to predict that the forces now in motion in agriculture will subside in the near future.* In fact, some scientists believe that new technology in farming will be adopted at an even faster rate in the next two decades. Most of these new developments, like many in the past, will require increased size, more capital, and more sophisticated management.

As all of these forces converge, it becomes more difficult for an individual to become established and compete successfully in commercial farming. Some family-owned partnerships and corporations and a number of sole proprietorships will be able to control the resources needed to organize an efficient farm business operation for some time to come. However, the problems of settling estates where large amounts of capital and high estate taxes are involved and the inability of some families to work together in solving the intergeneration transfer of farm units will gradually work to the advantage of larger-scale, less family-oriented, entrepreneurial control of agricultural output. The forces imposed from the processing, marketing, and distribution section will also further this trend, particularly for those farm commodities that are important components of an integrated food production-market-service system.

In the final analysis, the public at large also has an interest in who will control U.S. agriculture. The public interest may focus more on philosophic and social values rather than on economic ones because abundant production of food products is likely under either a dispersed or concentrated system.

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Agricultural Economic
Report No. 107

ECONOMIES of SIZE in FARMING

Theory, Analytical Procedures, and a Review of Selected Studies

ECONOMIC RESEARCH SERVICE
U. S. DEPARTMENT OF AGRICULTURE

FOREWORD

Efficiency and competitive stance of the family farm has been a lively topic for more than a decade. Advocates fear the family farm cannot continue to compete against large-scale farms with their high degree of mechanization and apparent use of advanced technology. It generally has been assumed that family farms have higher costs per unit of output--bushel, bale, ton--than large-scale farms. To test that hypothesis was the purpose of the study that resulted in "Economies of Size in Farming", AER-107 published 5 years ago.

In the report, Dr. Madden had pulled together and summarized the research results of many independent studies that directly or indirectly had dealt with the economies of size in farming. Madden's selected list of references included 138 items, and I am sure he used many additional manuscripts that had not yet been published. His central conclusion was that full-scale, fully mechanized one-man or two-man farms achieve most of the economies due to size of operation. Their costs per unit of output are equal to or lower than those of much larger farming operations.

While the data--the numbers--are now a bit out-of-date, the basic relationships and the conclusions reached in the original manuscript are still valid. The findings and conclusions have not been invalidated by more recent studies such as AER-216 "Midwestern Corn Farms: Economic Status and the Potential for Large and Family-Sized Units"--in fact, the two publications are complementary. Moreover, no other research report has come along to take the place of AER-107, which is still the standard reference on the subject. We continually refer the public to it. The report is in great demand.

It's for these reasons that AER-107 "Economies of Size in Farming" is being republished at this time.

Warren R. Bailey

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Washington, D. C. February 1967

HIGHLIGHTS

Selected studies of the economies of size in crop production, specialized beef feedlots, and dairy farms were reviewed. The theoretical basis for analyzing economies of size was discussed, and several alternative analytical procedures were examined.

The analytical procedure that provides the most reliable results in studying economies of size in farming is the synthetic-firm or economic-engineering approach. When the farm organization includes relatively few choices, this type of analysis may be done through manual budgeting. But when more complex farming operations are analyzed, linear programming is helpful. Choice of a residual claimant (the factors that absorb profit) strongly influences the height and shape of the average cost curve. For example, as more factors are included in the residual claimant, total cost is reduced, thus lowering average cost.

A modified concept of the farm firm--viewing the farm as a goods-and-services firm--provides a realistic basis for explaining the persistence of a relatively large number of small farms and part-time farms. This concept also helps to account for the rising importance of custom-hired farm operations.

A number of studies of crop-farming situations in various States were reviewed In most of these situations, all of the economies of size could be achieved by modern and fully mechanized 1-man or 2-man farms.

Three studies showed 1-man farms were capable of achieving average costs as low as any larger size. In the production of cling peaches in California, average cost was found to be a minimum as orchard size reached 90 to 110 acres--basically a 1-man operation--when mechanized practices were used. The utmost efficiency was attained by a highly mechanized 440-acre irrigated cotton farm in Texas and a 1,600-acre wheat summer fallow farm in Oregon.

Studies of Iowa crop farms and crop-livestock farms in the 1-man and 2-man size range were reviewed. When full ownership of all machinery was assumed, 2-man farms were found to be more efficient than 1-man farms. But when the hiring of timely and reliable custom service was considered for certain field operations, the average cost per unit of output for the smaller farms was reduced considerably. Under this assumption, the 1-man farms were nearly as efficient as 2-man farms.

In a study of vegetable farms in the Imperial Valley of California, farms of less than 640 acres were found to be nearly as efficient as larger sizes. Among field-crop farms in this area, economies of size were found to occur up to about 1,500 to 2,000 acres. Custom hiring was found to be very advantageous to smaller farms in this area.

Three other California studies reviewed gave similar results. Cash-crop farms in Yolo County achieved lowest average unit cost at a farm size of 600 to 800 acres, producing sugarbeets, tomatoes, milo, barley, alfalfa, and safflower. In Kern County, farms producing cotton, alfalfa, milo, and barley achieved their lowest average cost at about 640 acres. Cotton farms in the light-soils area of Fresno County were found to be most efficient at about 1,400 acres, while farms in the heavy-soils area of the county achieved their greatest efficiency at 700 acres.

Even though most of the studies show that all the economies of size may be attained by moderate sized farms, they also show that total profit may frequently be increased by extending beyond the most efficient size. However, uncertainty and management problems often become troublesome as farms become very large. This may discourage farm enlargement in many cases.

In specialized beef feeding businesses, the studies reviewed found that nearly all the economies of size are attainable in an intermediate size range of 1,500- to 5,000-head capacity. Beyond this size range, the average cost curve continues to decline slightly, but the savings per head are relatively unimportant--in the range of $1 to $2 per head fed. Slight reductions in the price of feeder cattle or feed have a much greater influence on the overall cost and profit of the feeding operation. Also, the rather small technical economies of size attainable beyond the intermediate size range are readily erased if the facilities are not utilized at full capacity throughout the year.

Management problems do not seem to become prohibitively difficult as feedlot size increases. A relatively small geographic area is involved, and the labor functions are quite routine and repetitive throughout the year. Thus, supervision of several hired men is not burdensome. Coordination also seems to be fairly easy for a wide range of feedlot sizes, because the biological and mechanical processes involve relatively little uncertainty. The empirical findings examined in this report suggest that beef feedlots will continue to exist in a wide variety of sizes, with a continued decline in the number and relative importance of small feedlot operations.

Studies of dairy farms in various parts of the country showed that 1-man and 2-man dairies can achieve highly efficient operation if they have control of sufficient capital and utilize the modern milking and housing technologies. Very little evidence is currently available regarding the efficiency of larger dairies--over 100 head. However, the results of one study suggest that management problems become troublesome at about 150 head. For instance, it is difficult to feed each cow according to her production as herd size and the number of hired men increase. Also, the operator of a large dairy does not have time to "shop around" and obtain the lowest possible feed prices.

ECONOMIES OF SIZE IN FARMING

Theory, Analytical Procedures, and a Review of Selected Studies

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INTRODUCTION

Since World War II, the number of farms in the United States has decreased substantially. Those remaining are getting larger, more specialized, and more highly capitalized. This is largely the result of a shift from small, self-sufficient farms to highly commercial farms. The direction and speed of these trends raise questions of public policy: Where are we headed? Are these trends necessary for efficient production? Are the resulting gains in efficiency offset by less tangible, but important, losses to society? Should the trends be encouraged or discouraged--or should we follow the doctrine of laissez faire?

This report is concerned with one aspect of these questions--the relationship between farm size and efficiency of production. Farmers, farm leaders, Government officials, businesses serving agriculture, and others continue to raise questions related to the economies of farm size. How large must a farm be to achieve the most efficient operation? Are larger farms always more efficient than small and intermediate-size farms? Are size-efficiency relationships of major or minor economic consequence? Many studies of the economies of size have been made, dealing with a wide variety of commodities and locations. The present report is an attem to provide a conceptual framework within which to assimilate some of these independe studies into a unified body of information.

Considerable misunderstanding has centered around divergent definitions of the terms "size" and "scale." The term scale is used many places in the literature wher proportions of resources are held constant, as in Euler's theorem (105).1/ However there appears to be almost universal agreement among economists that in real life firms do not expand all resources and products in exactly equal proportions as the level of the firm's activity is increased. An increase in just the same proportions would probably be due to accident rather than to overt design of the entrepreneur. Thus, virtually every empirical study examining the relationship between average cost and level of production allows for changes in the proportions of factors and products, whether the analysis is done under the name "economies of scale" or "economi of size." The term "economies of size," as used in this report, means reductions in total cost per unit of production resulting from changes in the quantity of resources employed by the firm or in the firm's output.

1/ Underscored numbers in parentheses refer to Selected References, p. 72.

The cost curves resulting from the many studies on the subject vary from one study to another. Most studies show that the ultimate in efficiency is attained by 1-man or 2-man farms; others show larger farms to be most efficient. Some of these differences are "real" variations in the size-efficiency relationships of the farms studied. Real variations may occur because of differences in (a) factors associated with the type of farming analyzed, (b) factors associated with the location of the farming area, such as climate, soil type, prices, wage rates, and yields, and (c) factors influenced by the date of the analysis, such as technologies considered, secular price changes, and Government price-support and supply-control programs.

Unfortunately, not all of the variation among study results is "real." Much of the variation is methodological--caused by differences in assumptions and procedures It is often difficult for the reader to discern how much of the difference between the shapes of the cost curves derived in separate studies is due to real differences in size-efficiency relationships and how much is methodological. A primary purpose of this report is to clarify the concepts underlying the procedures and assumptions used in economies-of-size studies. This in turn will aid in interpretation of published studies, and guide the design of future studies.

The reader who is primarily interested in learning the general size-efficiency relationships for various types of farming may prefer to skip the theory and method sections of this report, and proceed directly to the discussion of the individual studies on page 34. However, researchers and others interested in the precise interpretations and the procedures underlying the findings of these studies will find a careful examination of the theory and methods sections to be useful.

THEORETICAL BASIS FOR ECONOMIES OF SIZE--A REFORMULATION

An economist relies heavily on economic theory and theoretical models in his day-to-day dealings with real-world problems. The more realistic these theories are, the better equipped the economist is to work effectively with actual problems. The heart of economic research is economic theory. But the coronary artery that keeps this heart alive and useful is the feedback of improvements in the theory that are generalized from research experience in the real world. Thus, theories are made more realistic, and consequently more useful, as they are modified and broadened to take account of observations and phenomena not previously explained by the existing body of economic theory (74, p. 7).

Several modifications of the traditional economic theories are suggested here. Since theoretical treatments of production and cost curves abound in economic literature, only a brief statement of the conventional theory is given. 2/ Two sets of interconnected concepts are reformulated to facilitate proper interpretation of economies-of-size studies. These are the concepts of (a) longrun versus shortrun planning horizons as related to fixed versus variable resources and costs, and (b) resource divisibility. Other modifications of economic theory are suggested to better take account of some apparent inconsistencies between existing theory and the observed behavior of farms.

2/ An excellent treatment of the theory of production and cost is given by Walters (136). His article, particularly the bibliography, is highly recommended to the student of economies of size.

Length of Run and Fixity of Resources and Costs

Economies-of-size analysis is usually couched in terms of longrun and shortrun situations.3/ Shortrun economies are viewed as resulting from fuller utilization of a fixed plant, longrun economies as resulting from efficiencies obtained by changing plant size, presumably involving a longer time period. This concept is represented graphically in figure 1. The shortrun average cost curves (SAC) assume one or more resources to be fixed--available only in specified quantities--in the short run. The typical "u" shape of these shortrun average cost curves is explained as follows: Average costs per unit of output decline with an initial increase of output because fixed costs are spread over more units; eventually, however, average costs level off and then rise as other resources must be added in increasing proportions to the fixed resources to reach greater levels of output. A separate shortrun average cost curve applies for each level of the fixed resources--that is, for each size of plant.

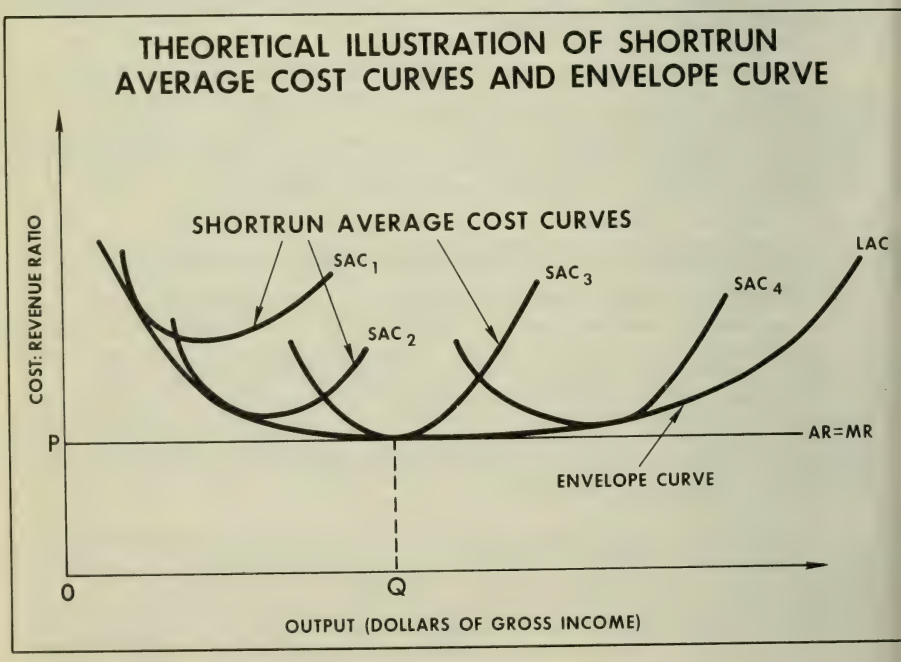

Figure 1

3/ One of the best statements of the theory underlying cost curves is given by Jacob Viner (135).

The selection of any resource as fixed in the short run is usually an arbitrary decision, based on observed practices of operators, the length of planning horizon being examined, and the longevity of the resources involved. This decision has no effect on the eventual shape of the longrun average cost curve. The longrun average cost curve (LAC) assumes all resources are variable, including those designated as fixed in the short run. A curve that is drawn tangent to shortrun curves approximates the longrun economies-of-size curve for that segment of the industry represented by the shortrun curves. This curve indicates the average total cost of production that would be experienced by firms of different sizes under assumed price relationships and technologies.

The fixed versus variable classification of costs and the longrun versus shortrun classification of planning periods have no effect on the basic size-efficiency relationships represented by the envelope curve. However, several other important economic principles related to equilibrium size of firm and survival of the firm owe much to this dichotomy.

Of first consideration is the principle that in the short run the firm will continue producing as long as revenue is great enough to cover variable costs, or conversely, as long as average variable cost is less than or equal to average revenue (price). Variable costs are the costs associated with the resources that are not fixed in the short run. Fixed costs are associated with the existing plant, or the resources that are considered fixed in the short run.

Another familiar principle is that in the long run, the firm can remain in production in its present form only if revenue is great enough to cover total cost (fixed plus variable)--in other words, if average total cost is less than or equal to average revenue.

A third important principle is that under conditions of atomistic competition, prices will gravitate toward a level such that all profits tend to be erased. Thus, the return to each resource will tend toward the level that provides exactly enough return to keep it from being drawn into alternative employment, but not enough to attract additional resources that would expand production. In equilibrium all firms would produce a level of output corresponding to the low point on their average total cost curve (level Q in figure 1). The theoretical average cost curve for a typical firm, as shown in figure 1, assumes that all firms produce under identical conditions. The line at p, lying tangent to the longrun average cost curve at point Q, is the average and marginal revenue schedule for a firm in perfect competition. Profit is zero at this point; firms producing larger or smaller quantities would suffer a net loss.

These concepts seem very clear and simple, until we try to apply them to an actual farming situation. When is the end of the longrun reached? Which resources are included in the fixed plant, and conversely, which resources are variable? These questions are complicated by the complex nature of farm resources. Durable resources have various life spans, ranging from 2 or 3 to 30 or 40 years or even longer. The number of years that an individual farmer keeps a tractor or implement depends on a series of considerations. Land is sometimes considered a fixed resource, but not always. The number of regular laborers is often viewed as one of the basic factors defining the size of a farm, but in some studies even this resource is considered variable.

A similar lack of precision surrounds the longrun-shortrun dichotomy. The long run implies a length of time sufficient to allow changes in the levels of all resources employed by the firm. The short run is viewed as a "short" period of time, such as one production season--a period so short that the firm does not have time to change the amounts of the fixed resources.

This time-oriented dichotomy is a somewhat inadequate concept for explaining the behavior of farm firms. Because of the various lengths of time that the different classes of resources are held fixed in an actual firm, no single short run can be exactly specified. Rather, the situation involves a large number of successively longer lengths of run, as additional resources are allowed to vary in quantity, until eventually all resources are variable and the truly longrun planning horizon is achieved.

Two facts further complicate this issue. First, the resources do not necessarily become variable in any predetermined order. For example, land may be held constant while machinery is varied, or vice versa. Second, both the length of run and the amount of time a certain subset of resources is held fixed are fictional time periods, not identified by any amount of calendar time. In real life, new firms are created or disappear every day. The levels of all the various resources are continuously being changed. At any point in time an entrepreneur could inject himself into the long run, simply by considering the effects of changing the levels of all the resources employed by his firm. As long as he considers one or more of his resources to be fixed in quantity, he is operating or planning in one of the many shortrun situations. Thus, length of run and fixity of resources are relative terms, rather than distinct entities. Furthermore, they depend entirely on the entrepreneur's frame of mind.

The moment a resource is committed to production it becomes fixed as far as the day-to-day management decisions are concerned. It becomes essentially a free resource that will be substituted as far as possible for resources that have not yet been committed to production. For example, the firm will tend to delegate as much work as possible to regular hired men or unpaid family workers, rather than hire additional laborers. As long as the farmer considers these regular laborers as a permanent part of his business, their wages become in effect part of the overhead.

In resource substitution language, the price of committed resources is zero. Thus, the shortrun economic optimum calls for increasing the employment of these resources as long as this will increase output; that is, to the point of zero marginal value product of the committed resources, and zero marginal rate of substitution for noncommitted resources that still have an effective nonzero price. But as soon as the entrepreneur considers varying the quantity of one of these resources, its price becomes relevant again. If an increase in this resource is considered, then the current purchase price becomes relevant. If either a decrease in the level of this resource or a shift in its use is anticipated, then the current salvage value or opportunity cost becomes relevant.

Now let us relate these concepts to the interpretation of economies-of-size studies. When average variable costs are presented, the reader should inquire as to which resources are considered as variable and which ones as fixed. Let us denote the variable resources as subset V, and the fixed resources as subset F. With these categories in mind, the reader can then proceed to interpret the empirical results of a cost analysis. The firm will tend to continue operating as long as it receive

enough revenue to at least cover the cost of all the variable resources. As the planning horizon is lengthened, the entrepreneur considers variation of additional resources. These resources are conceptually shifted from the fixed to the variable subset, and revenue must be correspondingly larger if the firm is to remain in production for this length of planning horizon. In the longest possible run, all the firm's resources are in the variable subset (V), and the fixed subset (F) becomes empty.4/ Therefore, in the long run, revenue must be equal to or greater than total cost--including the direct cash cost of operating expense items, and the opportunity cost or reservation price of all other resources, including entrepreneurial capacity. In other words, average total cost must be less than or equal to average revenue if the firm is to remain in production indefinitely in its present form.

Resource Divisibility and Economies of Size

In addition to, and independently of, being considered as either fixed or variable, resources may be classified as either divisible or discrete. As the name implies, discrete resources are available to the firm only in counted quantities (whole numbers) of specific size units. The discrete unit may be a single item, such as a boiler, or an increment of a certain size, such as a quarter section of land. Divisible resources are available in measured quantities, in contrast to counted quantities. These include such things as electricity, fuel, and custom-hired services.

The distinction between discrete and divisible resources is not always clear, nor is it the same in all areas. For example, local customs and practices in one area may dictate that land be sold in 40-acre or 160-acre increments as a discrete resource; in another area it may be sold in irregular-sized plots as a divisible resource.

Chamberlin points out that nondivisible resources may sometimes become available to a firm in divisible quantities (22). This can occur when the firm obtains the undivided use of the discrete resource unit for a fraction of the production period. For example, a hay baler may be owned and operated jointly by two or more farmers. Likewise, an accountant may be hired on a part-time basis. Custom hiring and leasing are also possible in some cases, as a means of making an otherwise discrete resource available on a divisible basis.

Divisible resources are usually fully utilized. Some may be obtained in the exact amount needed, as in the case of electricity, water, and custom-hired services. In the case of other divisible resources--gasoline or fertilizer, for instance--leftover quantities may be stored for future use, or returned to the dealer for credit. On the other hand, discrete resources are often underutilized, even by well-organized firms. For example, a tractor of a certain size may be underutilized with 640 acres but may not be able to handle 800 acres, while local practices may dictate that land is available only in increments of 160 acres. Many such instances exist in which the discrete resources do not "come out even," because they have different capacities.

4/ Lengthening the planning horizon does not necessarily imply an extension of time, as indicated earlier. The long run could occur in a single day.

In general, the smaller the incremental unit of a discrete resource relative to the total quantity used by the firm, the closer the firm can come to achieving full utilization of that resource and any other discrete resources with which it is jointly used. In the above example, suppose now that land is available in 40-acre increments instead of 160, and that the tractor would be fully utilized with 695 acres. The firm could move from 640 to 680 acres, and thus achieve a fuller utilization of the tractor.

If all resources or resource services were available in divisible quantities, then any underutilized resource could be replaced by a slightly smaller and (presumably) slightly cheaper resource, and full utilization of all resources could be achieved. 5/

This whole matter of full utilization of a resource should now be placed in the broader context of the firm's actual behavior. Full utilization is a partial means of reducing average cost of production, as the cost of the resource is spread over more units of output. However, full utilization of one discrete resource may not be compatible with full utilization of certain others. Furthermore, reducing average cost of production is only a partial means of increasing profit, and, after all, profit is the motive force of the firm. Thus, a firm would not necessarily move from 640 to 680 acres to achieve full utilization of a resource. Considerations other than full utilization might be more important. For example, total profit might be higher with 640 acres than with 680. Or, perhaps some other resource such as the operator's labor or capital might be limited. Also, the operator might decide to allow a little excess machine capacity as a safeguard against losses due to untimeliness of operations resulting from unfavorable weather.

Problems of Uncertainty and Coordination

Most studies of the economies of farm size have shown that as farm size increases, average cost either (a) decreases, or (b) remains about the same, or (c) on very large farms, increases slightly but still is below average revenue, even for the largest farms observed. This implies that profit increases steadily as farm size increases, and that the largest farms are the most profitable. It would be expected, then, that farms would tend steadily toward the largest sizes, and that the size distribution of farms would be shifting accordingly. This does not seem to be so, however. In many areas and for many types of farming, the most rapid increase in number of farms is in the intermediate size classes, consisting chiefly of farms that can be operated by one or at most only a few full-time men, using modern technology and adequate capital. The number of very large farms seems to be increasing only gradually and, in some cases, to be decreasing.

5/ This seemingly utopian situation--perfectly divisible resources--is approximate when all resource services may be hired on a custom or contract basis, as in the Imperial Valley of California (20).

This is consistent with broad changes in U.S. agriculture generally. After detailed analysis of a special tabulation of census data, Nikolitch has identified three postwar trends:

> First, the very small units account for more of the net decrease in number of farms. Second, farm production, land and other resources are concentrated not in a smaller number of large farming organizations, but in a rapidly expanding number of adequate farms. Finally, the number of farms and farm production are increasing more rapidly among adequate family farms than among the larger-than-family farms (94). 6/

How can these trends be reconciled with the empirical findings indicating huge profit possibilities for very large firms? The approach used here is to refine the concepts underlying the traditional theory to allow for the treatment of uncertainty and difficulty of coordination as factors limiting indefinite expansion of farm size.

Definitions of Supervision, Coordination, and Entrepreneurship

Management is traditionally defined to include two components: Supervision and coordination (70). Entrepreneurship (uncertainty-bearing or risk-taking) is often considered as different from management because it is the unique function of the entrepreneur.

Entrepreneurship is an essential element in any firm. It is a specialized and personal attribute that cannot be bought on the market. Because men are unequal in entrepreneurial ability, the production function will vary from one person to another (136, p. 4). Entrepreneurship involves making major decisions such as hiring supervisors and plant managers, and making broad judgments regarding total resource use, choice of enterprises, technology employed, and disposition of products (104). Furthermore, it involves bearing the responsibility for the outcome of these decisions in terms of the financial success or failure of the firm. The farm operator usually serves three functions--labor, management (including coordination), and entrepreneurship. Additional supervision and coordination may be provided by hired managers, foremen, or boards of directors (22), but only the operator, the owner of the enterprise, can perform the entrepreneurial function.

Supervision is overseeing day-to-day operations of the firm, seeing that each task is performed correctly. Coordination involves determining the kinds of contracts to be entered into, seeing to it that the necessary resources are available for timely completion of individual tasks, and carrying out adjustments in response to

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6/ "Adequate family farm" is defined as a farm business with sufficient "resources and productivity to yield enough farm income to meet expenses for (a) family living; (b) farm expenses, including depreciation, maintenance of the livestock herd, equipment, land and buildings, and interest on borrowed capital; (c) enough capital growth for new farm investments required to keep in step with technological advance and rising levels of living."

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uncertainty and changing conditions. The essential feature of coordination is that every decision must be made in the context of all the other decisions already made or likely to be made. This gives rise to the unitary character of coordination--all interrelated information must pass through a single brain. Boards of directors may be the coordinators, but each member is obliged to keep all the data concerning interdependent aspects of the firm's operation in his mind. Machines and computers can make coordination more efficient in some cases, but the loss of reality due to the coding and decoding of information sometimes leads to errors in judgment. Devices such as 2-way radios and closed-circuit television also increase the individual's effectiveness and capacity for coordination. But with a given state of technology, the quantity of resources other than coordination that can be advantageously added will be limited by management's degree of ability to coordinate the firm's activities (22).

Coordination and Supervision Problems Unique to Farm Firms

The firm's activities can be thought of as integrating and aggregating many different stages of production. 7/ Conceptually, a stage consists of all the productive services, both durable and nondurable, that cooperate in a single major operation or group of closely related minor operations. The delineation of a stage will vary from one situation to another, depending on the importance of the operations involved and the way they fit into the time sequence of the production process.

One crucial difference between factory production and farm production is the relationship between stages. In a typical factory operation, the object being produced flows through a series of stages, all of which can proceed simultaneously at spatially separate points. In farm production, the stages typically are separated by waiting periods, but occur in the same areas. For example, many stages occur on an acre of corn--plowing, planting, cultivating, harvesting--but the stages are separated by waiting periods because the biological processes involved take time to complete. 8/

This difference has important effects on the labor and management requirements of the two types of firms. Coordination of factory production poses unique problems not faced by most farms, because a large number of different stages are continuously being performed by many different persons at different places in the plant. Interpersonal communication and supervision problems tend to be more serious as the number of employees increases. In farming, the stages are spread out over a long period of time, so that relatively few operations must be coordinated, and only a few people employed, at any given time.

7/ An excellent formulation of this concept is given by French, Sammet, and Bressler (46).

8/ The author is indebted to John M. Brewster for pointing out this important distinction. For a more thorough discussion of this concept, see Brewster's paper The Machine Process in Agriculture and Industry (15).

On the other hand, the farm manager's task is complicated by (1) the relatively large dispersion of workers in most types of farming, and (2) the necessity for regular farm laborers to shift repeatedly from one kind of work to another throughout the production season. These features lead to a considerably greater supervisory input per man in farming than in factory operations, where most workers perform essentially the same tasks throughout the production cycle.

Uncertainty and Coordination Problems as Factors Limiting Farm Size

Farm enlargement is frequently limited by uncertainty and the difficulty of coordinating larger farms. As the farming operation becomes larger and more complex, the number of unpredictable situations requiring unique decisions becomes burdensome, because the coordinator must relate each decision to all the other decisions that have been made or are going to be made. At this point, the amount of other resources that can be profitably added is limited by the ability of management to coordinate a larger operation. In cases where coordination is a limiting resource, the marginal value product of additional resources becomes less than their marginal cost. Consequently, the presence of a profit margin does not necessarily imply that additional resources will be drawn into production. Similarly, in cases where the high degree of uncertainty leads farm operators to place a high reservation price on their coordination and entrepreneurial abilities, the profit potential is not sufficient to attract new firms into production, or to induce existing firms to greatly expand their operations.

According to Knight, coordination is essentially a dynamic function--reacting to changes in the pecuniary and technical situation that occur under conditions of uncertainty (74). Thus, the need for coordination is a feature of uncertainty and disequilibrium, rather than of perfectly competitive static equilibrium. In Marshall's stationary state, no coordination would be needed. Management would be reduced to supervision. However, Kaldor points out that in the actual world the size of an individual firm may remain more or less limited because the inherent profit-maximizing tendency of the firm to expand will be continuously defeated by spontaneous changes in the pecuniary and technical situation (70).

Hicks is in general agreement with Kaldor on this point. He contends that we can perceive forces that might lead to a determinate size of firm even if changes in the quantity of the coordination factor were allowed. Under conditions of uncertainty, one of the obstacles to attainment of very large firm size is the increasing difficulty of management and control as the firm gets larger (62, p. 200).

This phenomenon could be viewed as a decreasing marginal productivity of the coordination factor, requiring the very large firm to make a greater than proportional increase in coordination as the levels of the other resources are increased to achieve higher levels of output. This would tend to force the average total cost curve to turn upward at some very large size of firm.

Hicks cites risk as another item in the list of phenomena that might inhibit the indefinite expansion of a firm. The effect of increased risk may be represented as a downward shift in the discounted average revenue curve for very large levels of output. The marginal revenue function would fall even more rapidly, and would eventually intersect the marginal cost curve. Beyond this point, discounted profits would

decline with greater output. This point of intersection could occur even within the range of constant average cost, where the marginal and average cost curves coincide. Thus, Hicks concludes that in cases where risk increases with level of output, size of firm may be limited (62).

In this discussion, Hicks considered only the revenue-decreasing aspects of risk, ignoring the fact that sometimes risk also increases cost. For example, a sudden outbreak of a contagious disease may force a beef feedlot operator to incur an additional operating cost for medicine and veterinary service. Timely detection and treatment might be more difficult for large operations. Other examples are the use of frost-inhibiting devices and the hiring of custom harvesting to "beat the weathe In some instances, the cost-increasing effect of risk may be more serious as size of farm increases. In such cases, the downward-sloping discounted average revenue curve would be intersected (at an even smaller size of firm than Hicks indicated) by an upward-sloping "adjusted" marginal cost curve. In other instances, as Whitin and Peston have pointed out, the larger volume of resources available to bigger firms pro vides an advantage in meeting contingencies (138). For example, consider the volum of spare parts that a repair firm must hold in inventory to achieve a given probability of never running out of any specific item. As the size of the firm increases, the required volume of spare parts increases by a smaller proportion than the increase in the amount of repair work done. Another case in which larger firms might have an advantage in meeting risk is in providing backup machines to be used in case of break down or mechanical failure of one of the regular machines. It is reasonable to believe that the proportion of backup machines needed to provide a given probability of always being able to avoid breakdown delays would decrease as the size of firm and total number of machines increased. Cooper points out that this would be particularl important in operations such as harvesting truck crops, where untimeliness would cause considerable loss (27).

Despite these possible exceptions, most elements of uncertainty make coordination increasingly difficult as size of farm increases and lead eventually to a maximum feasible size of farm, for the reasons summarized below.

Management becomes more difficult as the complexity and uncertainty of the operations increase. Complexity is a function of the number of interdependent data the operator must simultaneously perceive, understand, and relate to the overall operation. Three aspects of farming greatly increase the difficulty of management: Lack of uniformity among resources, spatial dispersion of the operations, and unpre dictable behavior of resources, environment, and the market.

(1) Uniformity of resources has an important bearing on both the coordination and supervision aspects of management. For example, a large farm with several different soil types is more difficult to manage than a similar size and kind of farm with highly uniform soil. Where the soils are extremely variable, some parts of the farm require more frequent irrigation or more thorough tillage than other parts. The operator often finds it easier to do the work himself than to be continuously advising a hired man who is less familiar with the soil characteristics, and, therefore, the way the different parts of a field must be irrigated or tilled. A uniform dairy herd is easier to manage and is more amenable to operation by hired men than a herd of diverse composition, where each cow must be handled in a special way known only to an experienced dairyman. A beef feedlot is easier to manage if the cattle are uniform in age, sex, appearance, and rate of gain because it requires fewer feeding

pens, fewer special rations, and less time and effort in separating the cattle for marketing. Difficulties associated with lack of uniformity of resources usually require special attention from the manager who must coordinate the operation. Some operators prefer to keep the size of their farms down to the acreage they can handle with little or no hired help. These farmers can expand their operations only by acquiring larger and higher capacity machines that allow them to cover more acreage, or by reducing the variability of their resources--for example, leveling and draining land or purchasing more uniform land requiring less coordination.

(2) Spatial dispersion, or distance, is another factor affecting management. When operations are going on simultaneously in widely separated parts of the farm, supervision is hampered by the need for frequent and prolonged travel back and forth to keep abreast of changing conditions. Coordination is also hampered by a lack of knowledge of what is happening in different places. Thus, communication problems and errors in reporting become important as size of operation increases, although they are less serious in intensive types of farming that occupy a relatively small area, such as poultry and beef feedlots.

(3) Lack of predictability also causes management difficulty. For example, in areas where market conditions are erratic or the weather is highly unpredictable, management problems are compounded. Unreliable laborers also add to management problems, increasing the amount of time management must devote to checking out and following up the tasks assigned to them. The same holds true for the other resource services the farmer hires. If experienced and competent family or hired foremen are available, or if a highly reputable and experienced service firm is hired to perform certain farm operations (spraying, fertilizing, harvesting, for example), then the farmer's coordination task becomes less complicated as part of the supervision is delegated to the family member or hired agent. Emergence of specialized service firms eases the farm-management burden, and opens up possibilities of farm expansion that would otherwise be impossible because of management problems during peak workloads.

Conditions That Foster Farm Enlargement

Despite the handicaps of and impediments to farm enlargement discussed above, in some areas and types of farming there has been a marked tendency toward larger farms. Considerable research must be done before we will understand all the preconditions and situations that tend to either favor or inhibit a widespread enlargement of farms. The following tentative generalizations may suggest additional areas of inquiry into the causal relationships underlying some of the important structural changes related to farm size.

To the extent that coordination is a limiting factor in the expansion of farm size, farms will tend to expand as management technologies become available and allow the operator to coordinate larger units. Improved roads, fast pickups, helicopters, and airplanes facilitate faster movement of management personnel. By reducing the need for movement of management personnel, telephones, two-way radios, and closed-circuit television allow management to keep up with developments in the firm, to make decisions, and to see that they are carried out properly. Physical arrangements can also reduce coordination problems. For example, a specialized beef feedlot occupies relatively little area. For this reason, it is easier

for the manager to coordinate the activities of several men and handle thousands of cattle in a feedlot than on a beef cattle ranch that is spread out over several thousand acres. Availability of a large supply of experienced and reliable farm labor, and of timely and reliable custom services to replace work otherwise done by farm labor, can reduce the need for supervision and simplify coordination.

More rapid farm enlargement should be expected in areas and types of farming where resources and production conditions are homogeneous, and put less of a strain on coordination. For example, in areas where soils are homogeneous and production conditions are relatively predictable, coordination of larger farms is less complex than in areas where extreme variations in soil and weather necessitate frequent mana gerial reaction to unanticipated conditions. Likewise, when irrigation becomes avail able in a semiarid region, yield uncertainty is reduced because farmers no longer need to rely on unpredictable rainfall.

It is widely recognized that Government price-support programs have facilitate enlargement of farms producing price-supported commodities and closely related prc ucts. When price uncertainty is eliminated, farmers feel more confident of their deb repayment ability. They are more likely to apply for, and creditors are more likely to give, the credit necessary to acquire the machines, land, and other resources nec essary for farm expansion. Similarly; yield uncertainty is reduced as irrigation becomes available, as new disease-resistant varieties are developed, or as rapid mechanical harvesters are developed to replace an unsure seasonal labor force. As the devices or technologies become available and widespread, farmers tend to "charge" a lower reservation price for the entrepreneurial service of bearing the uncertainty inherent in operating a larger farm. This lower reservation price will inevitably lead a greater number of entrepreneurs into larger farm sizes, and shift the supply curve to the right. Hence, the balance between profit potential on one hand and the opportunity cost and reservation price of additional resources on the other hand is tipped in favor of farm enlargement.

The Residual Claimant and Profit

Total cost and profit are complementary terms, in that they always add up to gross income or revenue. However, neither term has any precise meaning without a complete specification of the residual claimant--the set of resources that absorbs the profit. Total cost is the sum of the direct cash costs plus the opportunity cost or reservation price (whichever is higher) of any resources excluded from the resid dual claimant.9/ Thus, as more resources are excluded from the residual claima total cost increases and the residual profit becomes correspondingly smaller. How ever, in the long run, profit must be at least large enough to compensate the factors

9/ Conceptually, opportunity cost is the highest return a resource can earn in any alternative employment currently available. In accounting, opportunity cost is usually approximated by the market rate of return, such as going wage rates for operator and family labor, foreman salary for management, and the market rate of intere on capital investment. Some resources do not have any effective opportunity cost, in the sense that the going rate of return is less than adequate to retain the resource in use. In these cases, the reservation price becomes relevant, as the lower limit of resource returns below which the resource will simply retire from use. The reservation price usually becomes the cost that applies to entrepreneurship.

in the residual claimant, or these resources will seek alternative employment or retire from use. Under conditions of uncertainty, profit must be sufficient to compensate the entrepreneur for bearing the uncertainty of the firm's financial outcome. Thus, entrepreneurship (uncertainty bearing or risk-taking) is an essential element of the residual claimant.

Alternative Profit Concepts

Many alternative profit concepts are employed in empirical studies. Each of these concepts depends on a different (and usually implicit) definition of the residual claimant. Below, several of the most widely used profit concepts are described in common accounting and farm management terms.

Net cash income is gross income minus cash costs. This quantity indicates the cash remaining from the business after payment of all cash expenses for the year. Unless this figure is positive, the operator will be forced to draw on savings or outside sources for funds to continue in business, even during a single season.

Net farm income is net cash income minus depreciation. This is approximately equal to taxable farm income as defined by the Internal Revenue Service. As long as this quantity is positive, the operator can remain solvent indefinitely. He can replace his equipment, pay all cash costs, and have cash left over. However, the remaining amount of cash may be so low that returns to the operator's labor, management, entrepreneurship, and capital are below market rates. If this happens year after year, the operator will often find some way to earn a higher return for his resources, such as reorganizing the farm or even liquidating and reinvesting.

Operator labor and management income[10/] or simply operator income, is net farm income minus interest on investment. This quantity represents what is left for the operator's personal services--labor, management, and entrepreneurship--after paying for all the other resources at market rates. If the operator has full equity in his land and equipment, then the interest on investment is not a cash cost, but rather an opportunity cost reflecting what the capital would earn if invested elsewhere at prevailing rates of return. If the operator owned less than 100 percent of his resources and therefore paid cash interest costs, both his net cash income and his net farm income would be lowered by the amount of the interest charged. Operator income would remain unchanged.

Further distillation of "profit" may be achieved by pricing parts of the operator's personal resource contribution, thus further reducing the elements included in the residual claimant. For example, operator management income (or, more precisely, operator management and entrepreneurship income) is operator income minus an opportunity cost charged for the operator's labor. This amount is a return to the operator for his services of coordinating and supervising, and for bearing the uncertainty of the business.

10/ This term, as used in the literature, implicitly includes entrepreneurship, and could be stated more exactly as operator labor, management, and entrepreneurship income.

Finally, entrepreneurial income is defined as operator management income minus the opportunity cost for the operator's management (supervision and coordination).11/ This value is a return to the operator for his entrepreneurial function, uncertainty-bearing. Thus, it is a "pure profit," as defined by Professor Knight (74). In businesses involving some degree of uncertainty, this quantity must be positive for the firm to continue operating indefinitely. All resources are paid for at their opportunity cost, including the operator's labor and his management services of supervision and coordination, which could conceivably be supplied by hired persons. The only remaining element of the operator's service is his entrepreneurial function of bearing the uncertainty of the business venture.

Proper interpretation of a profit or cost statistic depends on how the residual claimant is defined. Conversely, what is included in the residual claimant depends on the purpose of the analysis and how the analyst intends to interpret his cost and profit data. If the reader is to fully understand and reconstruct the accounting data, he must know what resources are included in the residual claimant, and how each of the other resources was priced. For example, table 1 shows five kinds of net income in a way that allows the reader to choose his preference, and this list of possible "profit" concepts is by no means complete.

Cost:revenue ratios are also shown in table 1, assuming four alternative residual claimants, so as to demonstrate two important principles. First, as additional resources are included in the residual claimant, the cost:revenue ratios become smaller. Second, one-man farms appear to have lower average costs in relation to larger farms when the residual claimant includes all the operator's personal services (labor, management, and risk-bearing) than when labor is excluded. These principles provide a clearer understanding of the cost:revenue ratios or average costs in the various studies discussed later in this report.

This demonstration of the extreme diversity of assumptions serves to illustrate an important source of misunderstanding and erroneous interpretation of cost analysis studies. An example of a study showing a net loss for all firms analyzed will clarify the meanings and interpretations of the various profit concepts. This was a study of Arizona cattle ranches (83). The principal source of data was a 1961 survey of 34 ranches throughout the southwestern portion of the State. Grazing land in this area typically has a very low carrying capacity, and each ranch has vast expanses of rangeland, with only a handful of cattle gleaning their existence from each square mile. A typical ranch was budgeted for each size class based on the sample data. All the resources were valued at current market rates or opportunity costs, including $5,000 per man-year for family labor, 5 percent interest on investment capital, and 6 percent interest on operating capital.

Average cost per hundredweight of beef produced declined sharply as ranch size was increased. For example, a 5,300-acre ranch carrying a herd of 100 animal units had an average total cost per hundredweight of $54.64, compared with $28.39

11/ The salary of a hired farm manager or foreman is sometimes used as an approximation of this opportunity cost.

Table 1.--Alternative net income formulations and cost:revenue ratios calculated for optimal organization of farms at selected points on an envelope curve

Item	Unit	Optimal farm organization		
Resources:				
a. Regular labor (including operator)	Man-year	1	3	5
b. Tractor and equipment, 6-row	Number	1	3	4
c. Farmland (90.9 percent crop-land)	Acre	440	1,120	1,720
d. Irrigation wells	Number	4	10	15
e. Seasonal hired labor	Man-year	.4	.9	1.4
f. Investment (average value)	Dollar	294,347	748,087	1,147,086
Enterprise levels:				
j. Cotton	Acre	140	356	547
k. Grain sorghum	do.	121	306	470
l. Soybeans	do.	109	279	428
Costs:				
m. Operator management cost 1/	Dollar	2,974	7,634	11,732
n. Operator labor cost	do.	2,569	1,541	0
p. Interest on investment	do.	14,717	34,404	57,354
q. Interest on operating capital	do.	336	876	1,347
r. Depreciation	do.	4,449	11,370	17,307
Cash costs:				
Seasonal hired labor	do.	714	1,817	2,791
Hired regular labor	do.	0	5,138	10,276
Other cash costs	do.	19,300	50,091	78,003
s. Total cash costs	do.	20,014	57,046	91,070
t. Total cost	do.	42,085	108,237	167,078
Income:				
u. Gross income	do.	59,481	152,684	234,647
v. Net cash income = u - s	do.	39,467	95,638	143,577
w. Net farm income = v - r	do.	35,018	84,268	126,270
x. Operator labor and management income = w - p - q	do.	19,965	45,988	67,569
y. Operator management income = x - n	do.	17,396	44,447	67,569
z. Entrepreneurial income = y - m	do.	14,422	36,813	55,837
Cost:revenue ratio when residual claimant is--				
Operator risk-bearing = 1 - z/u	---	.758	.759	.762
Operator management and risk-bearing = 1 - y/u	---	.708	.709	.712
Operator's personal services (labor, management, and risk-bearing) = 1 - x/u	---	.664	.699	.712
Operator's personal services and capital = 1 - w/u	---	.411	.448	.462

1/ Assuming the opportunity cost or reservation price of operator management is 5 percent of gross income.

Source: (80).

for a ranch budgeted with about 43,000 acres of rangeland, carrying 800 animal unit Beyond this size only slight economies were attained. As ranch size increased to 90,000 acres of range with 1,680 animal units, average cost per hundredweight of beef produced declined only 55 cents, to $27.84.

These costs are well above the longrun projected beef prices for the area, an imply that the net return is not sufficient to meet the cash operating costs and depre ciation, plus the opportunity cost of capital (interest on the investment) and the oppo tunity cost of the operator's labor and management. However, these opportunity co items account for more than half of total cost. All of the composite ranches budget in the study were found to be capable of earning a positive net farm income, meetin all cash operating costs and depreciation, but not capable of meeting the opportunit cost on capital and the operator's personal services. A rancher having full equity in his operation could continue operating indefinitely, even though his resources failed to receive their opportunity cost. However, in a longrun planning situation such as that facing a prospective or new rancher or the heirs of a deceased rancher it seems unlikely that the resources would be invested in an Arizona cattle ranch unless all opportunity costs were met. 12/

This line of reasoning is generally valid for cases involving stable or constan land prices. However, when land prices are generally rising, farmers and prospe tive investors may be encouraged to invest in farming even though current net inco is not sufficient to meet the opportunity cost of all resources. Over a long period capital gains can be an important source of increase in net worth, particularly in view of the fact that realized capital gains are taxed at lower rates than income fro the farming operation. Throughout all of the studies examined in the present repo land values are assumed to remain constant, thereby ignoring the possibility of ca tal gains. The transition from this assumed situation to real life can be easily ma by applying the appropriate rates of capital appreciation.

Frequent Misinterpretations of Farm Cost and Profit Data

Most studies of economies of size show average total cost to be less than average revenue on the farms studied, leaving a profit which is sometimes rather large, particularly among very big farms. This leads to the idea that these very big farms are enjoying an exorbitant profit. The traditional formulation of the theory of the firm sometimes leads to concern over the existence of profit, for two reasons. First is the belief that if our competitive system is really function- ing, entry of new firms or expanded production by existing firms will surely force output up and prices down. Second is the belief that as the price is forced down toward the equilibrium level (tangent to the low point of the average total cost curve), all smaller firms will be forced to either expand or drop out of production This prospect is particularly distressing to those concerned about the future of th "small family farm."

12/ This would require either a more favorable set of resource costs and be prices, or more efficient technologies than those currently used on the typica Southwest Arizona cattle ranch.

Another reason for concern is that when the results of several independent economies of size studies analyzing a given type of farming in different areas are compared, it appears that some areas are considerably more efficient than others. This may lead to the conclusion that the areas exhibiting relatively higher cost curves will give way to the more efficient producing areas. These concerns are frequently the result of erroneous interpretations of farm cost and profit data, as discussed below.

The contention that the existence of a profit margin will always attract new resources is a misinterpretation of the key concepts of profit, total cost, and residual claimant. Total cost, as calculated in economies of size studies, includes a return to all resources excluded from the residual claimant. Since profit is the return to the residual claimant, and the residual claimant usually includes operator management and entrepreneurship, profit includes a return to the operator for supervising and coordinating the operation and for bearing the risk and uncertainty of the firm's financial outcome. Under perfect competition, equilibrium of the firm requires that the average revenue (marginal revenue) curve is tangent to the minimum point of the envelope curve (average total cost curve). Each resource is paid just enough to keep it from being drawn into other uses, but not enough to attract additional resources into production.

One vital assumption of perfect competition is that perfect knowledge prevails--no uncertainty exists. This implies that the marginal value product of the uncertainty-bearing factor is zero. Hence, the firm does not need to earn a pure profit, or net return to uncertainty-bearing or entrepreneurship. There is no pure profit at equilibrium under perfect competition, because there is no uncertainty. Firms will maximize profit (at zero level) or minimize losses by gravitating toward the minimum point on the envelope curve, at output level Q in figure 1.

Now, if we relax one of the assumptions of the perfect competition model, and recognize that uncertainty prevails, then we view firms as tending toward an elusive equilibrium that does involve a profit; that is, a return to uncertainty-bearing or entrepreneurship. Thus, average revenue will not necessarily be forced down to the minimum point on the longrun average cost curve. Firms in equilibrium would maximize profits (at some positive level) by extending output beyond level Q. But the presence of uncertainty leads real firms to hold production below the profit-maximizing level.

Farms smaller than the size corresponding to the low point on the average cost curve will not necessarily be forced out of production, as long as their profit potential is sufficient to overcome the opportunity cost and reservation price of small-farm operators. Opportunity cost is likely to remain relatively low for a substantial number of farmers who lack the skills, education, and mobility to be attracted into off-farm employment. Farmers will probably continue to place lower reservation prices on their management for 1- or 2-man operations, and higher reservation prices for larger operations that require supervision of several hired men and coordination of a highly complex operation. Furthermore, farmers will probably also continue to place a relatively lower reservation price on their entrepreneurial function in an operation that can be operated profitably by one or a few full-time men, as compared with very large, complex farm businesses that have a high probability of failure.

Another misinterpretation of farm cost analysis concerns interregional competition. Certain types of farming will not necessarily disappear from areas that seem to have relatively high production costs, nor will production necessarily gravitate into other areas that seem to be capable of greater efficiency. For any commodity or type of farming, there are considerable differences in production costs between areas. This variation is partly real, reflecting true differences in efficiency, and partly methodological, resulting from differences in accounting procedures, definition of residual claimant, and other assumptions employed in the cost analysis. Even when the methodological effects are sifted out, leaving only the real differences in production cost, one is still not justified in predicting unequivocally that the less efficient areas will give way to the more efficient ones. Such conclusions are invalidated by the familiar principles of comparative advantage and by other concepts underlying interregional spatial equilibrium analysis.

Another concept needing clarification is the relation between stabilizing forces, average cost, and supply functions. When uncertainty is reduced, the reservation price farm operators charge for their entrepreneurial service is lowered. Consequently, the real average cost and marginal cost are reduced. This has the effect of shifting the supply curve to the right, so that a larger quantity will be produced at a given price. This line of reasoning is essential to an accurate anticipation of the production response that will result from a change in price-support policy. For example, when a commodity is first brought under price support, one initial effect is the elimination of, or great reduction of, price uncertainty. This in turn reduces one of the resource costs, namely, the reservation price of the uncertainty-bearing or entrepreneurial factor. The supply curve is thus shifted to the right by an amount depending on the degree of price uncertainty existing prior to enactment of the price support. Thus, if price-support levels are established on the basis of the supply function as it existed earlier, then the output is likely to be much greater than anticipated, even taking into account technological change and rising yields.

Misinterpretations often result from failure to recognize entrepreneurship as one of the factors of production. When the perfect-knowledge assumption is relaxed the conventional classification of resources as land, labor, and capital should be extended to include entrepreneurship (risk-taking or uncertainty-bearing). Imputing residual returns to one of the usual factors such as labor or land or capital often leads to some peculiar findings, because entrepreneurship is not recognized as a permanent part of the residual claimant. An example taken from an analysis of irrigated cotton farms in the Texas High Plains will help to clarify this concept (80). Profit is defined in that study as the return to the farm operator for the management functions of coordination and supervision and for bearing the responsibility for a profit or loss from the farm's operation. In calculating total cost, each resource is priced at market rates on an annual cost basis, including an opportunity cost for the operator's labor.

Total profits earned by various sizes of farms analyzed are presented graphically in figure 2. [illegible] shortrun average cost curves are included to facilitate comparison of average costs and total profits per farm. The total profit scale is indicated on the right vertical axis, and the average cost scale (total cost per dollar of output) is indicated on the left vertical axis. When the two curves are considered simultaneously, several facts become evident. Average cost is almost constant over a wide range, from $60,000 to $235,000 of output, representing cotton farms of 440 acres to about 1,800 acres. Throughout this range, the cost:revenue ratio (ratio of

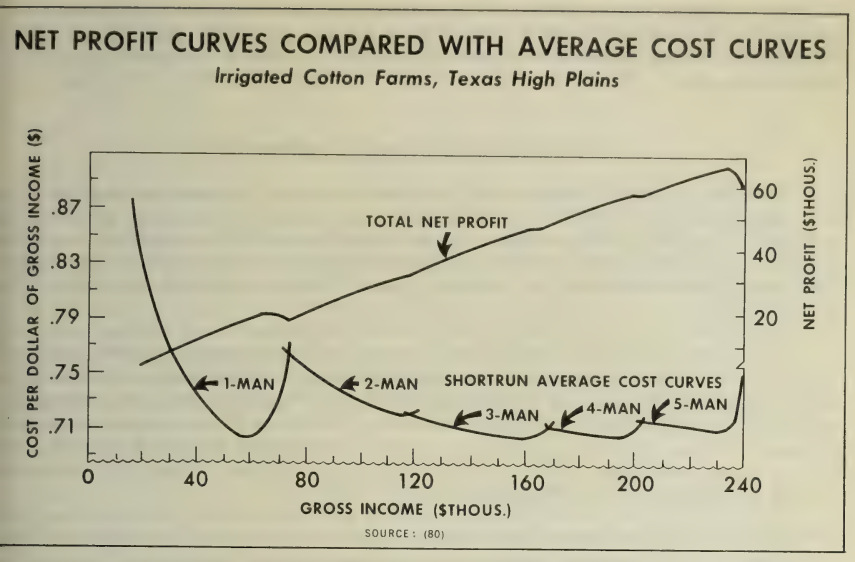

Figure 2

al cost to the income generated by incurring this cost) is less than 1.0. Therefore, total profit curve has a rather constant upward slope along this range of output. e 1-man 440-acre farm with 6-row machinery achieves an average total cost as as any of the larger farms. But the larger farms earn considerably higher profits, aling more than $67,000 annually for a 5-man farm with more than 1,500 acres of pland.

These results were based on 1967 projected prices and advanced technologies ilable at the time the analysis was done in 1962. Although profit potentials and e-efficiency relationships for earlier periods are not available, the relationships veloped here probably apply in general to earlier years in that farming area. More ecifically, it seems likely that during the period 1954 to 1959 farms with more than 00 acres of cropland were more profitable than similar type farms of smaller size.

During this period, the number of farms with 1,000 or more acres of cropland reased by 5 percent, while the number of farms with from 500 to 999 acres in-ased by 10 percent. Why did this profit potential not draw more firms into the gest size class? Perhaps this question can be answered partly in terms of the portunity cost and reservation price concepts. No one but the individual farmer nself knows the opportunity cost or reservation price which he places on his labor, nagement, and entrepreneurship. Following Haavelmo (49), one can see that a sible reason why so few firms have expanded to very large size is that the prom- of a greater profit potential is somewhat offset by the uncertainty and the difficulty coordinating the operations of these large firms. In other words, the profit potential

may be less than the sum of (a) the opportunity cost or reservation price farmers place on their labor and on their task of supervising and coordinating the efforts of several hired men, plus (b) the reservation price they place on their entrepreneurial services.

The Farm as a Goods-and-Services Firm

Now we turn to the other end of the size continum, and examine ways in which the changing form of the farm firm has led to changes in the structure of agricultur in general, and particularly in the nature of small farms. The modifications of tra tional theory offered here should also provide a framework for understanding size-efficiency relationships and for initiating research on the changing structure of U.S agriculture.

The farm operator is usually envisioned as being engaged only in the producti of goods, not of outside services, owning or otherwise controlling all the durable fa tors as fixed resources, and using these resources to provide services only for his own farm. A more realistic concept views the farm firm as (a) a producer not only of goods but also of various services, such as custom work and off-farm jobs, and (b) having the possibility of hiring various resource services in the amounts needed as well as owning and operating durable resources.

This broader range of economic activities allows the firm more possibilities for achieving harmonious organization of its operations. For example, when a far er custom hires all or part of an operation whose succeeding stages tend to overlap he can overcome peak workloads and can achieve greater harmony among the seque tial stages. He can also obtain a larger output from each of the competing farm en prises. Custom hiring allows the operator to expand an enterprise for which certa operations (such as harvesting of fresh vegetables) must be performed within rathe narrow time limits, or an enterprise whose requirements for labor and machinery over the course of the production period would conflict with other enterprises.

Coordination is frequently the limiting resource that necessitates the hiring c custom services. If two or more simultaneous operations each require a consider able amount of coordination, the result may be higher cost or lower revenue becau of improper or untimely execution of the operations.

On the other hand, a farmer who owns (or otherwise controls) a large, high-capacity machine is often able to perform certain operations so rapidly that he and his equipment are idle between sequential operations. This gives rise to excess labor and machine capacity that can be sold to other farmers as custom service. A part-time off-farm job can be viewed in a similar light, as a means of selling unus services of a fixed resource (in this case, the operator's labor) to another firm.

Under this concept, the output of a firm includes the income from custom wo done plus wages from off-farm jobs in addition to gross income from the sale of fa products. Custom services hired are included in the direct or variable cost items A farm viewed as a goods-and-services firm may have a lower average total cost than would the same farm viewed as a strictly goods-producing firm, since wages and income from custom work raise the gross income.

At one end of the goods-and-services spectrum are the farms whose sole source income is the sale of farm products. At the other end of the spectrum are the spe-lized custom service firms. In between are farms whose income from the sale of m products is supplemented by custom work or other services.

Emergence of Specialized Service Firms

Familiar examples of operations that are often performed by specialized custom rvice firms are grain harvesting and application of pesticides and fertilizers. Less niliar examples are seedbed preparation for vegetable crops, fruit-tree pruning, d artificial insemination. In fact, many stages previously performed as part of the m operation emerged as processing or marketing functions when specialized firms k over their performance. Consider, for example, grading and packing of fruits d vegetables, transporting and slaughtering of livestock, and the separating and urning of cream. In some areas and for certain types of farms, contract or cus-n service firms are available to perform virtually every task involved in growing rop, as is the case for vegetable farms in the Imperial Valley of California (20). other farming areas, relatively few production operations have been assumed by ch specialized service firms.

Custom operators and specialized service firms are often able to offer their rvices to farmers at cost-reducing rates. This is possible when there are im-rtant economies of size in the operations, and when the service firm can operate or near full capacity. Under some circumstances, the farm operator can reduce s variable costs by hiring custom work done, even when custom rates are higher an the average variable cost at which he could perform the same service. For ex-nple, if the hiring of custom work relieves a bottleneck and allows expansion of terprises that compete for limiting resources during a peak work period, and if e resulting increase in revenue is more than the cost of the custom work, then the m's profit has been increased.

In general, specialized firms tend to emerge whenever they can take over the rformance of a stage of production or series of stages and can earn a profit by ing so. Such a firm will succeed if it can perform a sufficiently large volume of rvice at a price high enough to overcome the high fixed cost of the specialized ma-inery and equipment. A relatively steady flow of business throughout the year is cessary to attain this volume. Some firms achieve this steady flow by migrating om one area to another to take advantage of differences in planting and harvesting tes. Custom wheat harvesting firms, for example, move northward through the reat Plains with the maturing date of wheat.

Rising Importance of Off-Farm Work

Viewing the farm as a goods-and-service firm also helps to explain the high d rising importance of off-farm jobs and custom work as sources of farm family come and profit. Farmers who employ increasingly productive machine technol-gies, but fail to make proportionate increases in the acreage they operate, often ave unused labor available for sale to other firms in the form of hired labor, or ey may be able to "sell" excess machine capacity by doing custom work. Pooling

the income from all three sources--sale of farm products, custom work performed and off-farm work done for hire--gives the gross income for a goods-and-service firm. The firm's costs are also increased by such items as operating costs and us depreciation on the machines used for custom work, and transportation and other co associated with the operator's off-farm job. But whenever the increase in cost is le than the increase in gross income, the firm's total profit is increased. From the e ciency point of view, whenever the increase in cost is less than proportionate to th increase in gross income, the firm's cost:revenue ratio or average total cost i decreased.

Off-farm jobs are an increasingly important source of income even amon operators of farms producing $10,000 or more worth of farm products annually During the 1950's, the proportion of these farm operators who had off-farm jobs in creased from 21 to 27 percent. The number working off their farms more than 100 days a year increased from 7 to 10 percent. Both off-farm jobs and custom w are important sources of net income to these farm operators; in 1959 they account for roughly $90 and $20, respectively, out of every $1,000 of net income earned by farm-operator families in this class (128).

Persistence of a Large Number of Small Farms

An important principle of microeconomic theory underlying economies-of-si analysis is that average total cost must not exceed average revenue if a firm is to remain in production indefinitely. The usual conception of the small farm as a fir engaged only in the production of goods necessarily gives rise to an average cost curve with a steep downward slope, implying that small farms are inherently inef cient and therefore bound to disappear quite rapidly. The empirical studies prese later in this report indicate that in the long run the break-even point for average c and average revenue per unit occurs well beyond $10,000 of annual gross sales of farm products. On the basis of conventional microeconomic theory, this would le one to expect farms producing less than $10,000 of gross sales to disappear rapid However, small farms have continued to exist in rather large numbers. During t 1950's, the number of commercial farms with less than $2,500 of gross sales (re resenting the main occupation and source of income to the operator) declined by 6 percent, leaving only 409,000 such farms by 1959. However, the number of farm with $2,500 to $10,000 of gross sales declined by only 20 percent, leaving 1.3 mi such farms by 1959 (93, table 15). The continued existence of nearly 1.8 millio commercial farms producing less than $10,000 worth of gross sales seems to ind a lack of consistency between theory and observed fact.

The persistence of a large number of small and part-time farms on the nati scene becomes easier to explain when the farm is viewed as a goods-and-service firm, thus allowing for the broader range of economic activities that farm operat actually engage in. Empirical studies have shown that relatively small farms ca achieve the ultimate in economies of size when sufficient custom service is avail for timely performance of farming operations (20, 66). Furthermore, off-farm is especially common among the operators of small farms. Among operators of with $2,500 to $9,999 of gross farm income in 1959, one out of three did some of work during the year, and one-sixth worked off their farms more than 100 days (93, table 13).

METHODS OF ANALYZING ECONOMIES OF SIZE

A wide variety of analytical procedures has been employed in analyzing economies of size. This variation comes in part from the diversity of purposes for and situations in which these studies have been conducted. A slight difference in focus or in the nature of the production setting can greatly alter the appropriate procedures. Likewise, the analytical procedure will dictate the kinds of inferences that can be properly drawn from a study. No single analytical procedure is best for all economies-of-size studies. The optimal method depends on the specific situation involved--the nature of the production processes being considered, and the kinds of questions the study is supposed to answer. The purpose of this section is to discuss and compare the techniques most often employed.

The widely used concept "returns to scale" should be mentioned briefly. Economists frequently fit a least-squares Cobb-Douglas production function to input-output data and then examine the sum of the exponents (production elasticities). If this sum equals 1.0, this is taken as proof of constant returns to scale. Decreasing, constant, or increasing returns to scale are indicated if the sum is less than, equal to, or greater than unity, respectively. In the concept of constant returns to scale it is assumed that if all inputs are increased by a constant proportion, k, then output will be increased by the same proportion. By definition, returns to scale are decreasing if output increases by less than k and increasing if output increases by more than k.

Herein lies the first weakness of the returns-to-scale concept: It applies only to situations where all inputs are increased by the same proportion. Such situations seldom occur in the real world. Furthermore, the returns-to-scale concept applies only at the geometric means of the variables--that is, for the "average" size of firm observed. The sum of the elasticities gives no indication of the relative efficiency of larger or smaller size of firms.

Another weakness is that the results are strongly influenced by several rather arbitrary decisions regarding the number and form of the variables included in the equation, the range of sizes represented by the basic data, and the algebraic form of the equation fitted to the data. Thus, the results are not determinate in an objective sense.

Perhaps the most serious weakness of this approach is its inability to accomodate discontinuities such as those resulting from discrete increments of land. The production functions used in this approach assume that the resources and products are infinitely divisible (136, p. 2). Considering all these limitations, the concept of returns to scale is considerably less useful than the concept of economies of size of scale as used in this report.

The Survivorship Technique

A method presented by Stigler (122) and Saving (111, 112), called the survivorship technique, has the advantage of being both simple and direct. It also has several weaknesses. This technique is predicated on the idea that competition among firms will sift out the more efficient sizes. Size of firm is measured in terms of the firm's

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capacity as a percentage of industry capacity. Firms are stratified so that both the number of firms in each size class and the percentage of the industry's capacity represented by each size class may be tabulated. Tabulations are made for two or more points in time. Size classes that exhibit a declining proportion of the industry's capacity through time are deemed to be inefficient. Conversely, an increasing proportion of the industry's capacity in a larger size class is taken as prima facie evidence of efficiency and the attainment of economies of size.

Stigler provides examples of this method from many industries. His data for the petroleum refining industry show that in 1947 some 130 firms were in the size class representing less than one-tenth of 1 percent of the industry's capacity. Data for later years show that the number of firms in this smallest size class declined sharply; the percentage of the industry's total capacity found in this size class declined also. In contrast to this trend, an increase in relative importance was exhibited by the class of slightly larger firms, each of which had from 0.50 percent to 0.75 percent of the industry's capacity. All together, this size class had 3.04 percent of the industry's total capacity in 1947, and 5.05 percent in 1954. The class of largest firms (each having 10 to 15 percent of industry capacity) showed a slight decline in percentage of total industry capacity from year to year, slipping from 11.65 to 11.06 to 10.72 percent in 1947, 1950, and 1954, respectively. These and other data are offered as evidence that very small petroleum refining companies are not as efficient as the larger ones, and that the very large firms are no more efficie than middle-sized ones (122, p. 68).

This type of proof is not very informative or convincing, because it leaves several pertinent questions unanswered. First, did those very small firms disappear because they were inefficient? It seems entirely possible (although perhaps not likely) that many of the very small firms disappeared from the ranks of the very small size class by a process of growth, expanding their operations and being classi fied in a larger size class in the succeeding periods. Furthermore, conceivably the small, growing firms were producing more efficiently (that is, at lower average tota cost) than any of the larger firms, and could even have experienced a decline in efficiency (rise in average total cost) as their size increased. This is a possibility whe (a) the envelope curve reaches its absolute minimum at a very small size of firm, a is true for some types of farms, and (b) when the average revenue curve is not forc down to the point of tangency with the envelope curve at the low point of the latter. When the average revenue curve lies above the minimum point on the average cost curve, firms can achieve a higher profit by extending output beyond that minimum point, even though they experience higher average total cost than the smaller firms operating at the low point of the average cost curve. Thus, it is possible that firms could disappear from a small size class by shifting to larger and more profitable, but not necessarily more efficient, operations. This possibility raises questions as to the reliability of the survivorship technique as a means of pinpointing efficient sizes of firm. Findings developed using this technique would be more credible if they could be shown to agree with the results of more refined analysis of representa tive firms or synthetic firms of various sizes.

The size-efficiency relationships may be masked by other factors. Declining relative importance of a given size of firm might result from many factors other than the inherent inefficiency of that size of operation. Location, access to resour and markets, quality of management, productivity of labor, degree of utilization of plant capacity, and physical design of the plant could all vary among the observed pl

Perhaps the most serious weakness of the survivorship technique lies in its measure of size: A firm's size is measured by its proportion of the industry's total productive capacity. The measure is highly elusive, particularly when the industry's capacity is changing. Furthermore, the results are of little meaning to planning entrepreneurs who seek the technical specifications of efficient and profitable plants. The findings give no hint as to whether the more efficient size firms are composed of a large number of small plants, or a few very large plants.

All these weaknesses of the survivorship technique would be largely alleviated if size of firm were measured in physical units, and if this technique were used in conjunction with the more incisive types of cost analysis discussed below. Standing on its own, this technique has little to recommend it as a method of analyzing economies of size. The only inferences that one is justified in drawing from a survivorship analysis are those regarding changes in the concentration of productive capacity in different size classes, where size of firm refers to the percentage of the industry's capacity found in the individual firm.

Direct Analysis of Actual Firm Records

Many researchers have attempted to determine economies of size directly from a sample of actual firm records. This procedure has the advantage of being rather quick and inexpensive if the farm records are readily available. To some people, the technique's direct connection with actual firms makes the results seem more reliable than the results of synthetic firm analysis, in which hypothetical plants are constructed on the basis of economic and engineering data reflecting advanced or better-than-average technologies. However, this direct accounting method has rather severe shortcomings, as illustrated by the following example.

Records of nonfeed costs were obtained from about half of the feedlots operating in Arizona during 1957 (91). In all, 94 feedlots were observed, representing 82.5 percent of all the cattle fed in the State that year. Average total cost per ton of feed fed was calculated for each of the sample feedlots. Size of feeding operation was measured in tons of feed fed during the year.

The largest class of feedlots fed an average of about 16,500 head per year. These large feedlots were found to have less than one-third as much nonfeed cost per ton of feed fed as did the smallest feeding operations. However, this size-efficiency relationship is confounded by two factors. First, other studies have shown that average cost declines sharply as percentage utilization of facilities is increased. In this study, larger feedlots were observed to be operating closer to full capacity than were the smaller operations. Therefore, much of the difference in average cost attributed to size of feedlot is actually the result of fuller utilization of facilities. Second, it is widely recognized that average cost varies with length of feeding period, classes of feeders fed, and the types and quantities of feed used. The observed feedlots varied widely in regard to all these factors.

Slightly different versions of this method have been applied in many other studies. In each case, the findings have been subject to similar limitations. As a result of these weaknesses, this procedure provides very little useful information about the effect of farm size per se on the average cost of production.

Composite Firm Budgets From Actual Firm Records

In a slightly modified approach, composite firm budgets are developed from actual farm records. The farm records are first separated into size classes. Within each size class a composite farm is developed using averages of the various recorded items (total acreage, investment, acres of each crop, yields, cash expenses, etc.). Then the average cost per unit of output of the composite farm in each size class is calculated, using assumed prices or observed averages. These results are then assumed to be "typical" of farms in the respective size classes. Comparison of these typical costs yields a size-efficiency relationship.

For example, Maier and Loftsgard (81) analyzed the costs and practices of potato producers in the Red River Valley of North Dakota. Data from 82 selected growers were separated into three size groups (based on potato acreage) to facilitate comparisons of costs and practices as potato acreage per farm increased. The average characterisitics, practices, and yields for each size group were used to form three composite farms to represent the three size groups. Fixed machine costs were allocated to the potato enterprise on the basis of the percentage of annual use devoted to that enterprise. Average cost was calculated as cost per hundredweight of potatoes. Operator and family labor were charged at local wage rates, and operator management was included in the residual claimant.

Farms in the largest size class, with 321 to 1,005 acres of potatoes, were found to have lower average costs than the smaller farms (table 2). However, these differences in cost were attributable not only to differences in size, but also to differences

Table 2.--Size-efficiency relationships for potato farms in North Dakota

Item	Unit	Small-size group	Medium-size group	Large-size group	All growers
Range in potato acreage	Acre	95-160	161-320	321-1,005	95-1,005
Average potato acreage	do.	122	235	517	287
Total costs per acre	Dollar	107.35	105.35	104.45	105.15
Average 1960 yields per acre	Cwt.	130	140	150	145
Total cost per hundredweight	Dollar	.83	.75	.70	.73

Source: (81).

in practices. For example, larger farms used more fertilizer and made more frequent chemical applications, and consequently achieved higher yields than the smaller farms. Although this study is very informative and useful for many purposes, it provides no indication of the potential efficiency attainable by farms in different size classes, in cases where all sizes use comparable technologies.

Studies of this kind differ considerably in the specific procedures and assumptions employed; however, they share several basic weaknesses. One is the possibility of inaccurate cost data. Different firms employ a variety of cost accounting procedures. Particularly troublesome are differences in handling resource inventories. In reporting purchases of certain inputs, a firm may not be accurately reporting the amounts actually used in production, because of changes in carryover inventory.

A more serious defect is that the composite farms do not accurately reflect the actual average cost of farms in their respective size classes. The class intervals are established subjectively so that the decision as to whether a specific farm is averaged in with a smaller or larger group is a matter of judgment, and the class averages are influenced by this judgment. Furthermore, as wider class intervals are used, the size-efficiency relationship is obscured. As narrower intervals are used, the number of farms in each interval is reduced, thereby making the results more vulnerable to minor fluctuations among farms as well as to errors in observation. Another source of inaccuracy is that, since several characteristics of individual farms are being averaged, the resulting composite firms have an aggregation bias, making them inaccurate replicas of the group of firms they represent.

Another basic fault of this method is that the composite farms do not accurately reflect the potential efficiency attainable by farms of various sizes. Many existing farms are using outdated machines and buildings, and practices that are grossly inefficient by modern standards. Some farms are operating at less than full capacity, or with inefficient combinations of enterprises. Averages calculated on the basis of data from these farms are not good indicators of the efficiency that a planning firm could expect to achieve with various sizes of operation.

Standardized or Adjusted Data From Actual Firms

Several techniques have been devised in an attempt to compensate for the limitations of cost data obtained from actual firms. In some cases, the data from actual firms can be adjusted to take account of such deficiencies as excess capacity or underutilization of facilities, and differences in method of reporting cost rates and prices in the firm records. For example, Carter and Dean (20) included a degree-of-utilization variable in their multiple regression model. This variable indicates the percentage of available machine capacity that is actually utilized. In calculating points for a cost curve, this utilization variable is set at 100 percent, so that each size of farm is evaluated on a somewhat comparable basis.

In another study, Dean and Carter (31) compared two alternative analytical procedures--a regression analysis using adjusted data from actual farm observations, and a synthetic-firm budgeting analysis. Sample data for the 1958 crop year from producers of cling peaches were adjusted to eliminate the effects of differences

in proportions of bearing and nonbearing peach trees. Also, the interest rates and depreciation formulas used in the farm accounts were standardized to conform with the procedures used in the budgeting analysis. The main difference in the results of the two analyses is that the regression analysis of actual observations indicates greater reductions in average total cost as size increases. In part, this is probably a result of the mathematical form of the cost function fitted (the Cobb-Douglas). However, it also reflects the substantial overinvestment in (or underutilized capacity of) machinery evident on the small farms. In the synthesized-budget analysis, the machinery investment on the small farms was fitted more exactly to requirements than is often the case in practice. Therefore, it is apparent that the synthetic-firm analysis provides a more accurate comparison of the potential efficiency attainable by each size of farm, when all sizes are efficiently organized without excess capacity The synthetic-firm analysis approach is now examined in detail.

The Economic-Engineering or Synthetic-Firm Approach

Synthetic-firm analysis is an appropriate technique when either of two research questions is asked: (1) What is the average cost per unit of output or profit that firms of various sizes could potentially achieve using modern or advanced technologies, or (2) what are the differences in average cost per unit of output attributable strictly to differences in size of firm, and not to differences in degree of plant underutilization, use of obsolete technologies, or substandard management practices.

In the synthetic-firm approach, budgets are developed for hypothetical firms, using the best available estimates of the technical coefficients--resource requirements and expected yields--and charging market prices or opportunity costs for all resources. Hypothetical firms are developed in much the same way that an architect or engineer bidding for a construction contract designs a proposed factory or bridge, and estimates the performance and cost of the finished product.

When the planning firm has few alternative choices, the synthetic firms can be constructed by using budgeting techniques.13/ However, when a large number of enterprises, or alternative technologies or levels of resources are considered, manual budgeting becomes burdensome and time consuming. Use of linear programming can greatly simplify the computations, particularly if a computer is used.14/ With a shift from manual budgeting to linear programming, each enterprise or firm activity budget is represented by a column in the linear programming tableau.

Every study of economies of size may require a unique model to reflect the peculiarities of the data involved. Several basic types of model have been employed For comparison with other types, a basic cost-minimization model is first presente in detail. This model is designed for multiple-product firms allowing variable proportions of resources and products.15/ Specific plant sizes are recognized. Short-run economies are obtained through increasing utilization of a given plant, up to its

13/ This method is widely used. See for example Bressler (9). For a more rece example, see Hunter and Madden (65).

14/ Conventional procedures are discussed by Heady and Candler (55).

15/ This model is discussed in detail with the aid of an actual example by Davis and Madden (29).

full capacity. Determining the longrun economies that are obtained as plant size increases, with all resources variable, involves comparing the efficiency of various plant sizes. A specific plant is represented by a given level of the fixed resources. Various degrees of utilization for a given plant may be represented by different levels of gross income. Thus, it is possible to specify the plant size and level of gross income in a cost-minimizing linear programming model and to compute the least-cost combination of products and variable resources for that specific plant and level of gross income. Then by calculating the cost:revenue ratio (total cost[16] divided by gross income), one point on the shortrun cost curve is determined for the specific plant size being considered. Additional points on the shortrun cost curve are determined by setting the level of gross income at various levels representing different degrees of utilization of the plant, and computing additional linear programming solutions. When a shortrun average cost curve is plotted for this specific plant size, the level of gross income is shown on the horizontal axis and the cost:revenue ratio on the vertical axis, as in figure 1 (p. 3).

Shifting to the next shortrun curve, fixed resources are set at new levels defining the next plant to be considered. Then successive linear programming solutions are computed for each of several levels of gross income, each representing a different degree of plant utilization. This process is repeated until a shortrun average cost curve is determined for each plant size. Then the envelope curve is plotted as the tangency of the shortrun curves.

This model has been used for developing average cost curves in several studies of economies of size. It can be described symbolically as follows: The predetermined data include the technical input-output coefficients (a_{ij}), variable costs (c_j), average gross revenue for real activities (g_j), and resource constraint levels (b_i). The problem is to determine the activity levels (x_j), such that

$$\sum_{j=1}^{n} a_{ij} \; x_j \leq b_i, \text{ and}$$

$$\sum_{j=i}^{n} c_j \; x_j = \text{minimum},$$

subject to the following constraints:

1. $x_j \geq 0$, for all j.

2. $\sum_{j=1}^{n} x_j g_j = G$, a specified level of gross income.

16/ Total cost is calculated for each programming solution as the sum of the costs incurred in the objective function plus the lump sum of costs pertaining to the plant size being examined.

3. b_i = constant for the i's representing certain fixed resources and

   $b_i \geq 0$ for other resources involved in "buying" activities,

4. Levels of the fixed resources are set at different quantities representing the various plant sizes to be analyzed:

   a. There are type-of-farming constraints on source of gross income, assuring that at least a specified percentage of gross income is produced by the main enterprise.

   b. The current farm price support programs can influence the area of land available for certain crops, and prices received for supported commodities.

The programming analysis determines the least-cost method of producing specified levels of gross income with certain size-determining fixed resources. Therefore, it can be said that the optimizing criterion is minimum cost per dollar of gross income.17/

Selection of appropriate gross income levels for a given plant size is accomplished largely by trial and error. However, a useful guide may be obtained using the unrestricted profit-maximization model described below, with the fixed resources set at appropriate levels to represent the specific plant sizes for which cost curves are to be derived.18/ This model employs the same coefficient (a_{ij}), average gross revenue (g_j), and resource levels (b_i). In this case, we also define r_j as average net revenue of the activities. Then the problem is to determine the activity levels x_j such that

$$\sum_{j=1}^{n} a_{ij} \; x_j \leq b_i, \text{ and}$$

$$\sum_{j=1}^{n} r_j x_j = \text{maximum.}$$

The constraints used are the same as those stated above, except that in the second constraint, gross income is not held constant. Instead, the program determines the one level of gross income which gives the largest profit attainable with the specified levels of the fixed resources. At that specific level, this model gives exactly the same solution as the basic cost-minimization model. However, this unrestricted profit-maximization model is by definition irrelevant for more than

17/ In a special case of this model, one of the resources is kept at a predetermined level throughout the analysis. For example, in the model developed by Miller and Nauheim (87), land is fixed at 1,600 acres (84).

18/ Miller and Nauheim also used this model (87).

one level of gross income. Only one point on a cost curve or revenue curve is determined. It is necessary to return to the basic cost-minimization model to determine other points needed to specify the cost curve.

The profit-maximizing level of gross income in the solution is useful in spotting the relevant range of gross income levels for each specific plant size. The profit-maximizing level of output will occur slightly to the right of the low point on the shortrun average cost curve in all cases where this low point lies below the average revenue curve.19/ The profit-maximizing level of gross income represents a level of plant utilization on the upward sloping portion of the shortrun average cost curve. Other values of gross income slightly above this level and for a considerable range below this level may be selected. Each of these levels of gross income should be specified as an equality in the gross-income row of the basic cost-minimization model. A separate cost-minimizing solution is computed for each of these levels, to determine points on the shortrun average cost curve. Then the same steps as for the cost-minimization model are followed.

Another model sometimes used in research such as this calls for minimization of the acreage of land used. This model employs the same set of data as the previous models. Net income is specified to be at one or more levels:

$$\sum_{j=1}^{n} x_j r_j = \text{constant.}$$

Land requirements (L_j) are specified for all activities. Then the optimizing criterion is

$$\Sigma \quad x_j L_j = \text{minimum.}$$

Other constraints include the first and third, and sometimes the fourth and fifth given above for the basic cost-minimization model.

This land-minimization model is useful for determining the largest number of farms, each earning a specified minimum net income, that can operate in a given area (124). One advantage of this model is that land values are not specified, thus eliminating one possible source of imputation error in the analysis. However, this does not provide for the simultaneous minimization of the cost of more than one resource, unless a resource price ratio is assumed, making this model a special case of the more general cost-minimizing model.

Several ingenious variations have been built into programming models to allow for the specific assumptions appropriate to the individual studies. One technique commonly employed is to specify rotations (such as corn-oats-meadow) and allow each vector to represent a specific rotation and a variation in some related technology (such as irrigation versus no irrigation). The programming model selects the

19/ In general, the maximum profit is achieved where the marginal cost curve intersects the marginal revenue curve from below. For the firm in atomistic competition, the marginal revenue curve is a horizontal price line. When price is above the low point of the average cost curve, the marginal cost curve passing through this low point intersects the marginal revenue curve somewhere to the right.

optimum number of acres for each rotation and related technology alternative. This allows variable proportions among products and resources (3), although these can be specified a priori if desired (36).

Numerous automatic programming techniques have been incorporated into economies-of-size models. For example, Carter and Dean (19) used variable capital programming and calculated the maximum gross income per dollar of capital for various levels of investment. Although it is not an economies-of-size analysis, a study by Heady and Loftsgard of farm planning for Northeast Iowa (58) is an excellent example of the use of variable resource programming techniques. Barker (2) successfully combined variable resource and variable pricing techniques to derive average cost curves. Mixed integer programming seems to hold considerable promise for economies-of-size analysis. For example, Madden and Davis (80) achieved integer values for irrigation wells, complements of machinery, and 40-acre increments of land, using successive approximations with a conventional linear programming code. Mixed integer programming codes are now available at some computer installations. With these and other improvements in programming technology becoming increasingly available, future economies-of-size analysis will become computationally easier and cheaper, and less abstract models will become feasible.

Point Versus Interval Estimates of Cost Curve

The typical approach used in economies-of-size analyses is to develop point estimates of the average cost curves. That is, the relationship between average cost and output is presented as a single curve. This procedure indicates a single average cost for each level of output, based on specific assumptions regarding prices, yields, and other technical relationships.

As an alternative approach, several different cost curves may be developed, each representing a specific combination of high or low product and resource prices and different yield assumptions. This approach gives rise to an entire family of point-estimated cost curves, and the relationship between output and average total cost can be represented as a curved band, rather than a curved line. The width of this band at any given level of output indicates the range of likely outcomes of average cost under the different combinations of price and yield assumptions.

This type of presentation is useful in that it warns the reader how high or low the average cost could be in any given situation. Such warnings should be taken into account by firms in their planning stages--particularly those most vulnerable to an unfavorable outcome. In many cases, entrepreneurs would choose an alternative with relatively lower expected net revenue and lower likelihood of failure, in preference to an alternative offering higher expected earnings but also higher likelihood of failure.

A useful refinement of this interval estimation approach is to develop probability confidence intervals to indicate the expected variation in average cost for given levels of output. This approach assumes that one or more of

the important resource or product prices or yields is subject to some degree of random variation. Thus, the variance of prices and yields, and consequently the variance in income and average total costs, is taken into account.20/

EMPIRICAL STUDIES OF ECONOMIES OF FARM SIZE

The foregoing theoretical and procedural discussions have set the stage for analysis of a selected group of empirical studies of crop farms, beef feedlots, and dairy farms. The discussion is designed to clarify the theoretical treatment, presented earlier, and to give the reader a more adequate basis for interpreting such studies. It is hoped that researchers will gain insight into the advantages and disadvantages of the various analytical procedures as an aid in planning future studies of economies of size.

A six-point frame of reference is used in discussing each of the studies.

1. Study area, type of farming, and date of study. An empirical study is usually applicable only to the area and type of farming for which it was conducted. Production techniques, yields, and costs change rapidly. Thus, it is important to recognize that empirical results are time-dated, being based on production practices and technologies employed during a specific period in time.

2. Range of farm sizes examined. In many of the studies, only the smaller sizes of farms were examined; a few studies extended to very large sizes. Proper interpretation of the resulting size-efficiency relationship requires that the size range examined be explicitly stated.

3. Method of analysis and key assumptions. As indicated earlier, the size-efficiency relationships indicated by study results are strongly influenced by the choice of analytical procedures and assumptions. One of the most crucial decisions regarding procedure is whether an actual-firm or synthetic-firm (economic-engineering) approach is selected, and whether current practices or advanced technologies are assumed. Also, the interpretation of the cost and profit data depends on the choice of residual claimant, and on the rates of return assumed for the operator's labor, management, and capital if these resources are excluded from the residual claimant. As mentioned earlier, the average costs per unit of production,

20/ Examples of this approach are given by Carter and Dean (18) and Moore (89). In Moore's study, average total cost is represented by the cost:revenue ratio. Variance of average total cost is then calculated by assuming that the numerator (total cost) is constant and that the denominator (gross income) varies. This simplifying assumption leads to a slight understatement of the true variance of average cost. If both the numerator and denominator of this ratio are considered as variables subject to random variation, then the variance of average cost is the variance of a ratio of two variates. This concept is discussed by M. G. Kendall in his discussion of the distribution of a ratio (71, p. 248).

or the cost:revenue ratios, are made smaller for all farm sizes by inclusion of additional factors in the residual claimant. And the left-hand portion of the envelope curve, representing the average cost for smaller farms, is lower when the residual claimant includes all the operator's personal services (labor, management, and risk-bearing) than when operator labor is excluded.

4. Size-efficiency relationship. Results of the studies are examined for their findings on (1) how large a farm must be to achieve the utmost efficiency and (2) whether the longrun average cost curve continues to decline throughout the size range, or reaches a minimum at a relatively small size of operation and remains more or less constant through the very large size range. With very few exceptions, the latter seems to be the typical size-efficiency relationship.

5. Size-profit relationship. Results of the studies are further analyzed for indications of the relative profitability of the various sizes of farms and of how large a farm must become to be profitable. Most studies show that even a 1-man or 2-man operation that is well organized can be quite profitable if prices do not sink to abnormally low levels and if modern technologies are used.

6. Changing size distribution of farms. Another point sometimes noted in discussing each study is the changing size distribution of the farms studied. When the available data permit, the size ranges that seem to be attracting additional farmers are compared with those that appear to be efficient and profitable according to the empirical studies. (This last step is a refinement of Stigler's survivorship technique discussed earlier.)

Crop Production

This section contains a discussion of economies of size in a number of different crop farming situations. Seven types of crop farms in five States are examined. The acreage that can be operated with a given labor supply varies widely from one farming situation to another--from the highly intensive peach orchards of California to the extensive wheat farms of Oregon. Capital requirements also vary considerably. In most of the farming situations examined, a modern and fully mechanized 1-man or 2-man operation can produce efficiently and profitably, achieving all or nearly all of the economies of size.

Cling Peach Production in California

In 1963 Dean and Carter analyzed the economies of size in cling peach production in the Yuba City-Marysville area of California (31). The size range of peach farms examined extended from 8 acres producing less than 100 tons to more than 400 acres producing over 5,000 tons of peaches annually. Synthetic-firm budgeting techniques were used to determine how the size efficiency relationships were influenced by changes in wage rates and the introduction of mechanized methods of pruning, thinning, and harvesting. The farm operator's personal services (labor, management, and risk-taking) were included in the residual claimant.

The basic synthetic-firm analysis showed that with the prevailing nonmechanized production practices, average total cost per ton of peaches declined as farm size

increased up to about 60 acres--marketing about 715 tons of peaches (fig. 3). Beyond that size, slight reductions in harvesting costs and machinery investment per acre were realized, but these were offset by increases in costs of hired supervision (foremen). Therefore, average total cost with prevailing practices was essentially constant beyond 60 acres.

When mechanized practices were used, average cost declined up to a farm size of between 90 and 110 acres--basically a one-man operation. Mechanized methods gave lower costs than present methods for large farms. The break-even point between current and mechanized practices occurred at 55 acres. When 25 percent higher wage rates were assumed, the break-even point between present and mechanized methods occurred at a smaller size--25 to 30 acres. When assumed wages were increased by 50 percent, the break-even point was 18 to 20 acres.

Both average cost and profit were found to be strongly influenced by the level of yields. For budgeted operations of efficient size, average cost was about 40 percent higher with low yields than with high yields. Furthermore, orchards with low yields showed net losses for a very wide range of peach prices and orchard sizes. In fact, profit margins were found to be so low as to make selling the business a serious alternative for growers with low yields, regardless of orchard size. On the other hand, orchards of only 20 acres were found to be profitable with high yields. Assuming the average 1957-61 price of $62 per ton, a 20-acre operation earned $2,400 return to the operator's personal services. Net return on a 50-acre operation was $10,000, while the operators of 100-acre and 300-acre orchards earned $20,000 and $60,000, respectively.

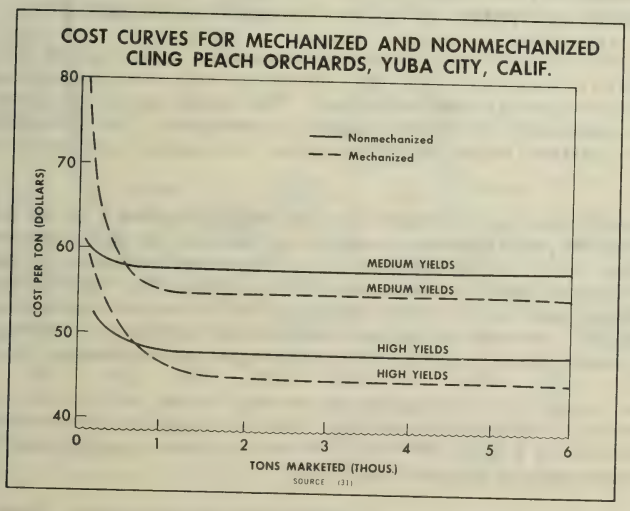

Figure 3

Possibilities for combining off-farm jobs with cling peach production were also examined. It was found that a farmer could handle 20 acres of peaches while holding down a full-time job, or 40 acres while working year-round at a half-time job. The analysis showed that off-farm work could greatly increase the income of small farmers. However, it was pointed out that the operator of a small farm could profitably sell his farm and revert to a full-time job, if he had a lucrative off-farm job opportunit

Iowa Cash Grain and Crop-Livestock Farms

The two studies discussed below dealt with separate farming areas, but both used similar analytical procedures. The findings were limited to the economies of size on 1-man and 2-man farms.

Southern Iowa

In 1960, Ihnen and Heady analyzed the economies of size for farms in nine south ern Iowa counties (66). Synthetic-firm budgeting methods were used, with emphasis on choice of least-cost machinery combinations for various farm sizes. The enterprises considered included corn, oats, meadow, soybeans, and a beef-cow herd producing feeder calves. Operator management, risk-taking, and land were included in the residual claimant, so costs included a charge for operator and family labor, but not for land. Crop losses due to untimeliness of operations were also included as costs. (In most of the other studies, crop losses were treated only as a reduction in gross income, not as a cost.) Full ownership of most machinery items was assumed initially, but for some operations custom hiring was considered for comparison. The budgeting analysis was conducted first under the assumption that only crop enterprises were used, and second, using both crop and livestock enterprises.

Farms with three different classes of topography--hilly, upland, and average--were considered in this study. The hilly mixture or hilly farm consisted primarily o rolling land with relatively little bottomland. The upland mixture or upland farm was composed predominantly of level to undulating upland soils. The average mixture or average farm consisted largely of rolling upland with smaller amounts of hilly and level upland.

The results were quite different in these three situations. On the hilly and average farms, the crop-livestock combination resulted in a lower cost:revenue ratio than crops only. For the hilly farms, average cost per unit of production declined to its minimum with a farm size of 320 to 360 acres, representing a 2-man operation with a 2-plow and a 3-plow tractor. The cost:revenue ratio was 0.95 at this point (fig. 4). One-man farms were shown to be incapable of meeting total costs in this area, under the basic assumptions allowing no custom hiring.

Similar results were obtained for the average farms, with a cost:revenue ratio of 0.90 occurring in the minimum average total cost range of 320 to 480 acres. In this case, however, a 1-man, 240-acre farm with a 3-plow tractor could break even The cost:revenue ratio at this point was 0.97.

Entirely different results were obtained for the upland farms. First, farms budgeted with only crop enterprises achieved lower average costs than the farms budgeted with both crops and livestock. Second, the 1-man upland farms were

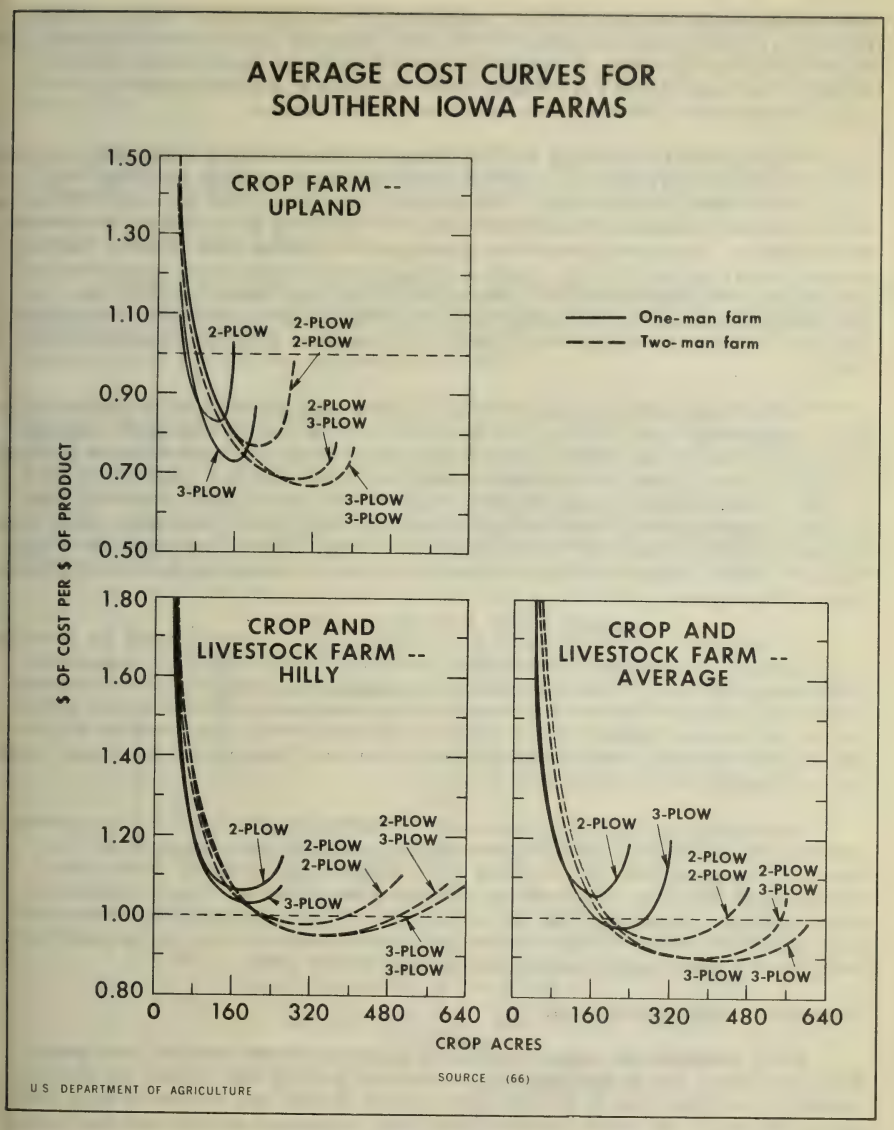
AVERAGE COST CURVES FOR
SOUTHERN IOWA FARMS
CROP FARM -- UPLAND
CROP AND LIVESTOCK FARM -- HILLY
CROP AND LIVESTOCK FARM -- AVERAGE
One-man farm
Two-man farm
2-PLOW
3-PLOW
2-PLOW 2-PLOW
2-PLOW 3-PLOW
3-PLOW 3-PLOW
$ OF COST PER $ OF PRODUCT
1.50
1.30
1.10
0.90
0.70
0.50
1.80
1.60
1.40
1.20
1.00
0.80
0
160
320
480
640
CROP ACRES
SOURCE (66)
U S DEPARTMENT OF AGRICULTURE

Figure 4

considerably more efficient than the 1-man hilly or average farms. Using a 3-plow tractor, a 1-man upland crop farm of 160 acres achieved a cost:revenue ratio of 0.62, which allowed a sizable profit margin for land and operator management and risk-taking. Two-man farms were slightly more efficient; a cost:revenue ratio of 0.57 was achieved with a 320-acre farm using two 3-plow tractors.

When custom corn picking and hay baling were allowed in the budgeting analysis the 1-man farms were able to achieve considerably lower average costs than they could have without custom hiring. For example, the 1-man crop farm with 240 acres of average land achieved a cost:revenue ratio of 1.02 when all machinery was owned by the farmer. But when custom corn picking and hay baling were allowed, the cost: revenue ratio declined to 0.91. Custom hiring of these tasks greatly augments the timeliness of the farm operations, thereby reducing crop losses. In this case, custom hiring brought the ratio average cost below the 1.0 break-even line, making the difference between a net loss and a positive net return to operator management and land.

Custom operations reduced by 25 percent the acreage required to achieve minimum average total cost. In fact, the budgeting results indicate that on the average-soils farms most of the cost economies available in crop production could be achieved with (a) a 1-man, 1-tractor combination with 150 to 290 acres of cropland, or (b) a 2-man, 2-tractor combination with 290 or more acres of cropland. However, the cost reductions associated with custom operations would not be realized if there were extensive waiting periods for custom services. Thus, an adequate supply of competent and reliable custom service is essential to efficient operation on relatively small farms of this type.

Calculations of profit per farm for various sizes of operation were not presented in this study. The residual claimant was initially defined as operator management, risk-taking, and land. When land was removed from the residual claimant (thereby adding a land rent to total cost) the cost:revenue ratio rose above 1.0 for all 1-man farms, and was only slightly below 1.0 for the 2-man farms. This implies that the net return to operator management and risk-taking was negative for the 1-man farms and very small even for the 2-man farms.

As with all cost analyses that assume a constant product mix, the cost curves obtained are suboptimal, because optimum resource combinations were not determined. Because of this, the resulting size-efficiency relationships do not reflect the maximum efficiency attainable by different sizes of farms. A more sophisticated analysis with a model that allows variable enterprise proportions would have given somewhat more accurate results, and consequently the cost curves would have been lower in some cases than the ones derived in this study.

Western and Northeastern Iowa

Using budgeting techniques similar to those used in the southern Iowa study discussed above, Heady and Krenz (57) calculated average cost curves for the Carrington-Clyde soils area in the northeast quarter of Iowa, and the Ida-Monona soils area in the west. As in the southern Iowa study, a constant product mix was assumed and primary emphasis was given to selection of optimum machinery combinations. Two rotations were considered--a rotation based on current practices and a 5-year

rotation of corn-corn-oats-meadow-meadow. Continuous corn was also considered in the budgeting analysis for comparison with the rotations in calculating total cost. No charge was made for the interest on land investment. Thus, the residual claimant was composed of land and operator management and risk-taking, as in the southern Iowa study.

For northeastern Iowa, the major reductions in average cost were attained at 280 crop acres with the continuous-corn program. The cost:revenue ratio was 0.42 at this size. The lowest cost:revenue ratio was attained at 320 acres under the 5-year rotation and at 400 acres under the current cropping program, with a cost: revenue ratio of 0.46 in each case.

A smaller machinery investment was required for the continuous-corn program than for the other two cropping programs. Average costs per dollar of output were slightly less for continuous corn, mainly because corn produces a greater gross income per acre than do oats, soybeans, or meadow.

Cost curves developed for western Iowa were considerably higher than those for the northeastern area (fig. 5). Most of the cost economies from acreage expansion were attained at 320 crop acres, as in the northeastern area, but average cost in this area was roughly 20 cents higher per dollar of gross income. This difference is partly due to lower yields and less intensive row cropping in the western area. However, if a land charge (interest on land investment) were included in the calculations of total cost, this difference would be partly or entirely eliminated because of differences in the price of land, and hence, in the interest charge on land investment.

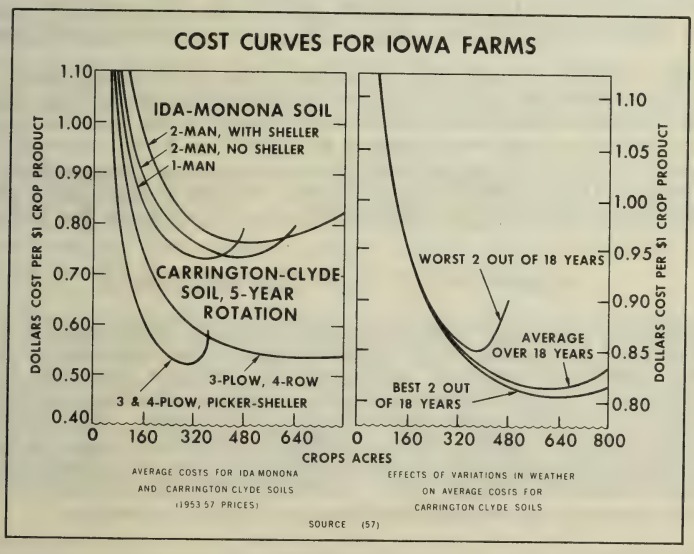

Figure 5

69-133 O - 72 - pt. 5A - 30

Another factor contributing to the differences in average cost was that losses from delays in hay harvesting were more severe in the western area. With more meadow (hay) in the rotations, expanding acreage led to untimeliness of operations, and consequently hay losses became more serious than in the northeastern area. Thus, the acreage attaining lowest average cost was smaller in the western area, particularly for the 2-man farms.

The effect of weather variations on the average cost curves was examined for the northeastern area. Under unfavorable weather conditions, average costs were generally higher, and the cost curves turned up at smaller sizes (fig. 5). These differences resulted from crop losses due to untimely operations.

One of the prominent conclusions of this study is that the longrun average cost curve is relatively flat over a wide range. For example, average cost was found to vary only 2 cents per dollar of gross sales on farms in the northeastern area with between 400 and 800 crop-acres. This small difference in average cost over such a wide acreage range would allow survival of farms of many sizes.

While this conclusion is probably correct in general, it must be pointed out that in the long run the profit margin (distance between the average cost curve and the price or average revenue line) must be large enough to prevent the residual claimant from being drawn into other uses. Presumably, the reservation price on management and uncertainty-bearing would increase as the size of farm increased from 400 to 800 acres, because of the more stringent demands on management and the greater uncertainty. In this case, we should expect fewer management and uncertainty-bearing resources (that is, fewer farm operators) to be drawn into 800-acre farms than into 400-acre farms when prices are low and profit margins thi

However, with relatively high and stable prices, profits would tend to exceed the farmer's reservation price on management and uncertainty-bearing, and consequently a considerable increase in the number of larger farms would be expected. This seems to be precisely what happened during the late fifties. Assuming that roughly one-fourth of the cropland would be devoted to corn, farms with 800 acres of cropland would have about 200 acres of corn. Between 1954 and 1959, the number of Iowa farms that harvested in excess of 200 acres of corn more than tripled (130).

Irrigated Cotton Farms in Texas and California

Economies of size have been analyzed for irrigated cotton farms in Texas and California, using the synthetic-firm (economic-engineering) approach. A separate study was conducted in each area, but the methods used were essentially the same. Each study used a linear programming model to determine the least-cost enterprise combination and resource combination for each level of output. Output was measured in terms of gross income, because multiple-product firms were involved. The programming models used in these studies were variations of the basic cost-minimization model discussed on pages 29-33. Certain modifications of this basic model were made to provide for the peculiarities of the study areas involved.

Texas High Plains

In the Texas study (80), irrigated cotton farms ranging from 120 to more than 1,700 acres, using from 1 to 5 man-years of labor, were analyzed. Cotton acreage

ranged from 40 to 570 acres. Basic data from a sample survey of farms in the Texas High Plains were used to determine certain resource requirements and practices. Prices were projected to 1968, and input-output coefficients were projected assuming use of advanced technology. Such technology included practices already used by the more progressive operators in the study area, or new practices whose workability and economic feasibility had been tested either by farmers or by agricultural experiment stations. It was assumed that eventually most farmers will adopt this advanced technology.

The programming model selected the enterprise combination--quantity of land, number of irrigation wells, and number of irrigations applied to each crop--required to produce each level of gross income at least cost. Then, using as its optimizing criterion the minimum cost per dollar of gross income, this analysis determined the optimum number of regular laborers and the number of tractors and complements of 4-row or 6-row equipment for each level of output. Land was considered to be available in discrete increments of 40 acres. Irrigation wells, regular laborers, tractors, and complements of equipment were also considered to be available only in discrete quantities.21/

The results of this study show cost data based on a variety of residual claimants. Data underlying the average cost curves reflect an assumption that operator management and risk-taking constitute the residual claimant. It was assumed, on the basis of survey data, that the operator would be required to devote an increasing amount of time to supervision and coordination as additional regular laborers were hired and as farm size increased. Thus, the amount of time the operator devoted to labor, and consequently the charge for operator labor, declined with larger farm size. In fact, the 5-man farm analyzed here was spread out over nearly 3 square miles, thus requiring the operator to devote full time to supervision and coordination. The labor cost for the 5-man farm thus included the wages of only the four regular laborers. The return to the fifth man was the profit, or return to operator management and risk-taking.

The findings show that the 1-man farm with adequate capital could be as efficient as any of the larger farms (table 3). In fact, a 440-acre farm with 102 acres of cotton, operated by one man with a set of 6-row machinery, could achieve an average cost of less than 71 cents per dollar of gross income (table 3). None of the larger farms could achieve lower average costs than the 1-man farm (fig. 6).

With the average cost curve remaining nearly constant at slightly above 70 cents per dollar of gross income over a wide range of sizes, total profit increased steadily with larger farm sizes. Thus, while the 1-man, 440-acre farm achieved the ultimate in efficiency and earned more than a $17,000 return to management, larger farms were more profitable. For example, on the 5-man farm, operator management and risk-taking earned more than $67,000 profit. Gross income on such a large farm would be nearly $235,000. More than $1 million of investment (average value) would be required, including some 1,720 acres of farmland with 15 irrigation wells.

21/ These resources were integerized by a process of successive approximations using a regular linear programming code (LP/90), which did not contain a mixed integer programming feature at the time the computing was done.

Table 3.--Irrigated cotton farms, Texas High Plains: Range in output and acreage, with lowest average cost for each size

Range in acreage	Output range 1/	Size of farm and minimum points on average total cost curves for each size group					
		Regular laborers	Complements of equipment		Output 1/	Farmland	cost: revenue ratio 2/
			4-row	6-row			
Acres	1,000 dollars	Number	Number	Number	Dollars	Acres	
120 to 240	17 to 33	1	1	---	43,600	320	0.732
240 to 680	33 to 75	1	---	1	59,500	440	.708
560 to 920	75 to 119	2	---	2	118,800	920	.730
880 to 1,280	119 to 166	3	---	3	152,700	1,120	.709
1,200 to 1,520	166 to 200	4	---	4	197,400	1,480	.711
1,480 to 1,800	200 to 239	5	---	4	234,600	1,720	.712

1/ Output is measured as gross income.
2/ Lowest cost:revenue ratio for given levels of output, with land variable.

Source: (80).

3514

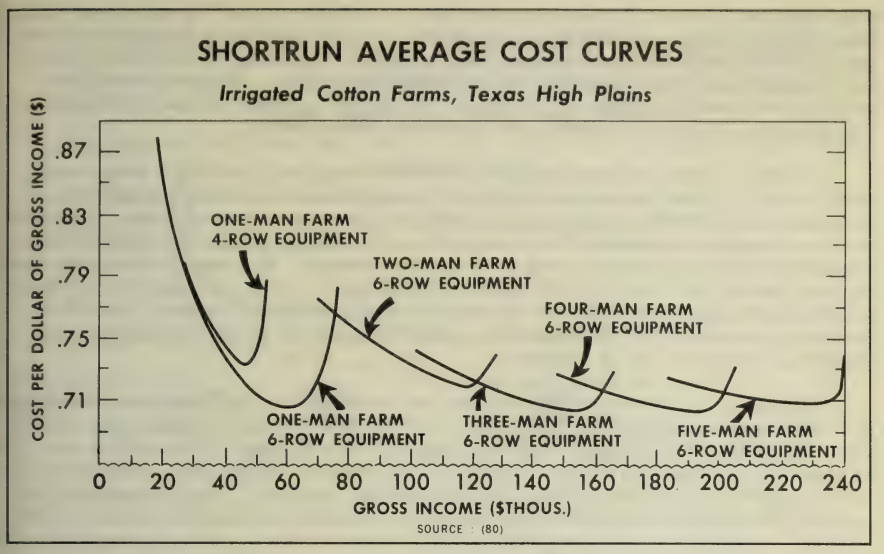

Figure 6

Despite this extremely high profit potential, the very large farms are not increasing in number as rapidly as are the intermediate sizes. During 1954-59, the number of farms in the Texas High Plains with more than 1,000 acres increased by only 5 percent, and the number of farms with less than 500 acres decreased. During the same period, there was an increase of 10 percent in the number of farms with 500 to 1,000 acres--1-man or 2-man farms.

Fresno County, Calif.

The area covered in Moore's analysis of Fresno County cotton farms (89) has two major soil types, one light and the other heavy, separated by the Fresno Slough. To the west of the slough lie the medium- to heavy-textured soils of the recent alluvial fans. Light, sandy soils characterize the area east of the slough. The resource requirements, yields, and practices were so different for farms in these two soil types that two separate cost analyses were conducted. Year-round labor supply was the primary measure of farm size in this study. The four sizes analyzed were 1-man, 2-man, 4-man, and 8-man farms. Amounts of farmland in the model farms extended beyond 2,000 acres. This study was completed in 1965, using prices projected to 1968 as in the preceding study.

For each farm size, both custom harvesting and the use of farmer-owned harvest machinery combinations were evaluated and were compared with regard to average total cost for producing specified gross incomes. Least-cost combinations of land, labor, and machinery were determined for each farm size for at least five levels of

gross income. Heavy tillage equipment units were held constant for any given farm size. This procedure permitted the evaluation of each machine in terms of the cost per unit when used at different capacities, but more important, it took into account the returns from labor released by labor-saving equipment. In other words, the analysis evaluated each piece of equipment by noting its impact on the overall farming operation, not as an isolated item operating independently.

Figure 7 shows the envelope curves for the heavy soils and light soils areas, respectively. These curves are bordered by approximate confidence boundaries, indicating plus and minus one standard deviation of the cost:revenue ratio. The variance and standard deviation of the cost:revenue ratio were calculated under the assumption that the numerator, total cost, was a constant. As points on the upper confidence limit of the average cost curve were calculated, total cost was divided by the quantity, gross income minus one standard deviation of gross income. The lower bound was calculated by dividing total cost by the quantity, gross income plus one standard deviation of gross income.

Considerable reductions in average cost were achieved as farm size was extend up to four men, representing more than 1,400 acres in the heavy soils area, and 700 acres in the light soils area. Table 4 compares the efficiency of farms of similar siz as shown in the Texas High Plains study and the Fresno County study, assuming oper ator management and risk-bearing are the residual claimant. Strictly speaking, the average costs derived in the two studies are not directly comparable because of the different assumptions regarding management requirements and other procedural matters. However, the overall effects of these differences are minor.

Table 4.--Comparison of acreage and average cost for optimal farm plans for irrigated cotton farms in Texas High Plains and in California

Study area	Acres		Cost:revenue ratio	
	1-man farm	4-man farm	1-man farm	4-man farm
Texas High Plains	440	1,480	0.71	0.71
Fresno County, Calif.:				
Heavy-soils area	270	1,134	.91	.85
Light-soils area	193	710	.83	.76

Source: (80, 89).

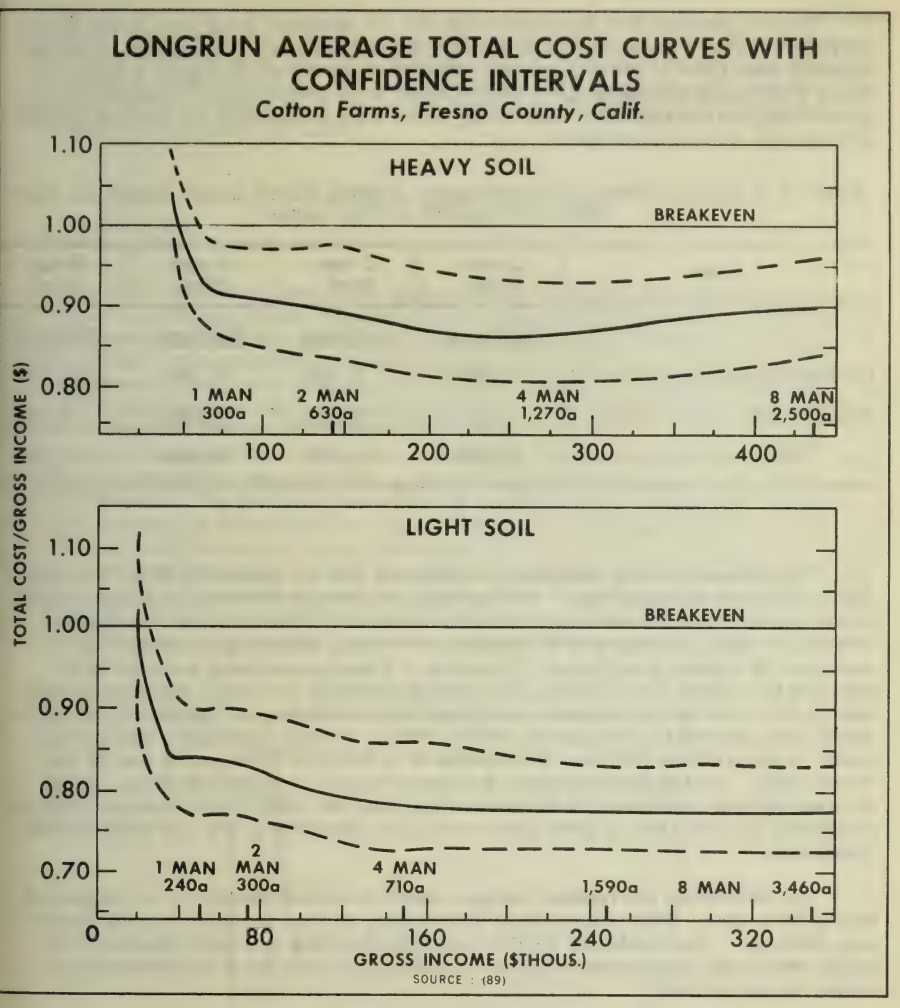
LONGRUN AVERAGE TOTAL COST CURVES WITH CONFIDENCE INTERVALS
Cotton Farms, Fresno County, Calif.
HEAVY SOIL
BREAKEVEN
1 MAN 300a
2 MAN 630a
4 MAN 1,270a
8 MAN 2,500a
LIGHT SOIL
BREAKEVEN
1 MAN 240a
2 MAN 300a
4 MAN 710a
1,590a
8 MAN
3,460a
TOTAL COST/GROSS INCOME ($)
GROSS INCOME ($THOUS.)
SOURCE : (89)

Figure 7

Moore assumed that the opportunity cost for operator labor used in the direct operation of the farm was the wage rate for tractor drivers. The portion of the operator's time spent in supervision was charged at the higher rate paid to foremen. Table 5 indicates the annual fixed cost charged to each farm size. Supervision requirements and consequently supervisory costs were assumed to be constant at $720 per man for all four farm sizes.

Table 5.--Fresno County, California: Annual fixed labor costs by farm size, irrigated cotton farms

Item	1-man farm	2-man farm	4-man farm	8-man farm
	Dollars	Dollars	Dollars	Dollars
Direct labor	4,380	8,760	17,520	35,040
Supervision	720	1,440	2,880	5,760
Total	5,100	10,200	20,400	40,800

The operator's time devoted to supervision was not subtracted from the labor supply available for farmwork. For example, the 4-man farm was assumed to have 4 man-years of regular labor available for farmwork. The operator was assumed to devote roughly half his time to management duties, providing about one-half a man-year of regular farm labor. The other 3.5 man-years were assumed to be provided by regular hired labor. The other farm sizes involved a comparable mixture of hired and operator labor, with hired labor replacing the portion of the operator's time devoted to management duties. Thus, regular hired labor was not assumed to be available in 1-man increments on a full-time basis, as it was in the Texas study. This difference alters the interpretation of results slightly, in that the analysis was predicated on the assumption that part-time hired laborers were as productive and required as little supervision per man-year as the full-time regular employees.

The proportion of cropland having a cotton allotment was found to decline with larger farm size. This is a result of institutional factors and historical landownership patterns. Moore allowed for this varying proportion of cotton allotment land in his investment requirements and in calculating the land price and the annual interest charge on land.

Another minor procedural difference between the Texas and California studies is that the residual claimant was smaller in the latter study: Only coordination and risk-bearing were included. Supervision was included with operator labor, hired labor, capital, and all the other resources in calculating total cost and the cost:revenue ratios underlying the cost curves. In the Texas study, supervision was included in the residual claimant. Since total costs and consequently the cost:revenue ratio are larger when more elements are excluded from the residual claimant, this

procedural difference has the effect of slightly raising Moore's average cost curves--by about 1 or 2 cents per dollar of gross income for all farm sizes. The cost data from the California study can be converted to the same basis as the Texas data, using operator management and risk-bearing as the residual claimant, by subtracting the supervision charge (table 5) from the total cost. This was done in calculating the cost:revenue ratios for table 4.

California Cash Crop Farms

Yolo County Cash Crop Farms

In 1960, Dean and Carter (30) analyzed the economies of size for cash crop farms in Yolo County, Calif., near Woodland. They employed a linear programming model similar to that used in the Texas study described above. The main crops grown in the study area were sugarbeets, tomatoes, milo, barley, alfalfa, and safflower. The linear programming model selected the optimum (least cost per dollar of gross income) combination of enterprise levels for each level of output.

A wide range of farm sizes was considered. Because of institutional and rotational considerations, the sugarbeet acreage allotment did not increase proportionately with size. The envelope curve (fig. 8) was therefore "u"-shaped, declining sharply to about $0.70 at $100,000 output, falling to a minimum of $0.65 at $240,000 output, and then increasing gradually to about $0.72 at an output of $440,000. Thus, farms with output beyond $240,000 (roughly 1,400 acres) began to experience rising average costs. The authors emphasize the fact that the "u" shape of their envelope curve might be directly attributed to resource and institutional restrictions which change with size, forcing changes in input combinations and output mix. Nonetheless,

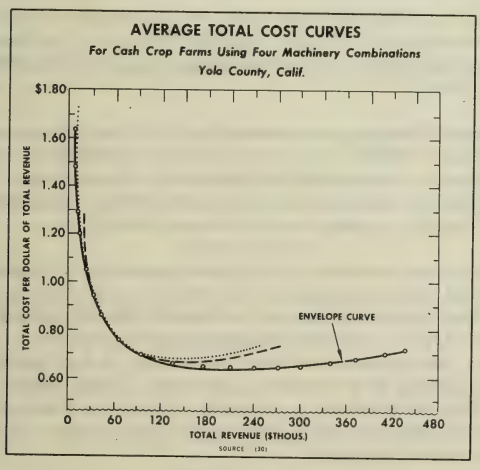

Figure 8

the planning curve did correspond to a realistic path of expansion for farms in the study area, and the analysis revealed definite economic reasons for the trend toward consolidation and expansion of smaller units in Yolo County.

On the other hand, the analysis did not indicate a strong economic incentive for expansion to extremely large size; farms of about 600 to 800 acres appeared able to compete on a unit-cost basis with much larger farms. And with unit costs approximately constant over a wide range, this 1960 study suggested that a continuation of a wide variation in farm sizes could be expected, with little tendency for a concentration at one optimum size. Dean and Carter suggest that this relationship may help to explain the relatively small number of farms actually operating in the extremely high output ranges.

Another important factor in the determination of farm size was the risk and uncertainty inherent in farming. Expansion in size ordinarily requires borrowed capital; as more borrowed capital is employed the risk of losing equity accumulated over time increases. Thus, farmers who have achieved an efficient size of unit and satisfactory incomes tend to "play it safe" in order to protect their current position. High income taxes for large farmers may also reduce the incentive to expand farm size.

This analysis assumed no pecuniary economies in purchasing inputs (discounts on large purchases) or in marketing products in large quantities. Neither were diseconomies due to inefficient labor use, coordination problems, or "red tape" considered. Therefore, the shapes of the cost functions presented arise entirely from other sources of economies and diseconomies.

Imperial Valley Field Crop Farms and Vegetable Crop Farms

In 1962, Carter and Dean (20) examined the economies of size for field crop farms and vegetable crop farms in the Imperial Valley of California. They used synthetic-firm budgeting procedures, assuming a fixed combination of crop enterprises for all farm sizes.

Five size classes of farms were examined in the budgeting analysis, the largest including farms of more than 2,400 acres. Custom hiring and contracting were considered as alternatives to the owning and operating of machines. The machinery combination developed for each size class represented a reasonably efficient setup, with some excess capacity to take care of unusual situations.

Field crop farms and vegetable farms were considered in separate analyses. Shortrun average cost curves developed for the five size classes are shown in figure 9. Because a fixed product mix was assumed, the output and average cost data may be expressed in terms of either acreage or gross income. The curve for the smallest size class, farms with less than 320 acres, is horizontal because all the operations were conducted on a variable cost basis, using custom hiring or contract operations rather than farm-owned equipment. Shortrun average cost curves for larger size classes exhibit the usual downward-sloping shape, a result of fuller utilization of farm-owned machines.

The envelope curve for field crop farms declines steadily to about 1,500 to 2,00 acres (total revenue of $300,000 to $400,000) and declines only slightly thereafter.

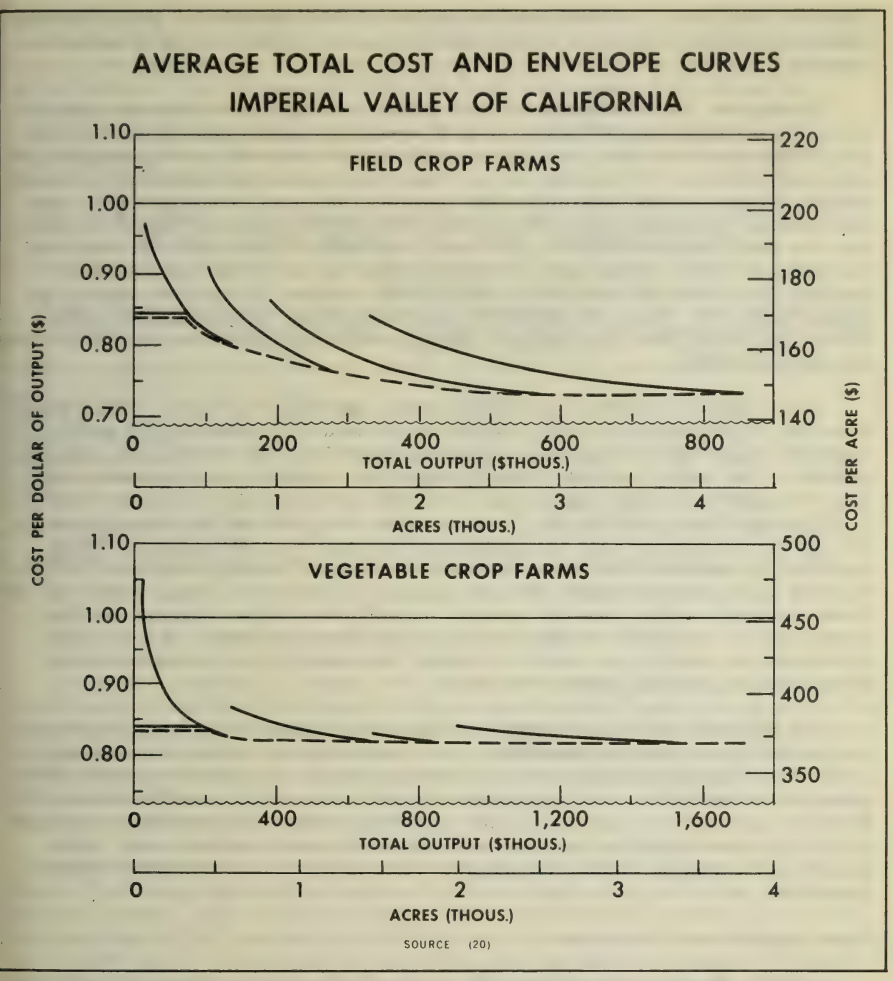
AVERAGE TOTAL COST AND ENVELOPE CURVES
IMPERIAL VALLEY OF CALIFORNIA
FIELD CROP FARMS
1.10
1.00
0.90
0.80
0.70
220
200
180
160
140
0
200
400
600
800
TOTAL OUTPUT ($THOUS.)
0
1
2
3
4
ACRES (THOUS.)
COST PER DOLLAR OF OUTPUT ($)
COST PER ACRE ($)
VEGETABLE CROP FARMS
1.10
1.00
0.90
0.80
500
450
400
350
0
400
800
1,200
1,600
TOTAL OUTPUT ($THOUS.)
0
1
2
3
4
ACRES (THOUS.)
SOURCE (20)

Figure 9

For each size group, minimum cost per dollar of total revenue (or per acre) was achieved with fixed resources (machinery and managerial labor) used to maximum capacity.

These cost curves emphasize three points: (1) Significant cost advantages accrue to increased size of field crop farm operations up to a size of about 1,500 to 2,000 acres; thereafter, the costs per unit of production decline only slightly and eventually level out; (2) if farms that are highly mechanized and otherwise set up to operate large acreages underutilize this capacity, they may have higher unit costs than smaller operations more fully utilizing their fixed resources; and (3) farms of any size could operate efficiently and make reasonable profits under the conditions prevailing in 1959. On the basis of cost per dollar of output, the envelope curve declines from about 84 cents at low output levels to about 73 cents for output in excess of $500,000. Thus, the net return to operator labor and management before income tax varies from 16 cents to 27 cents per dollar of output over the corresponding range in output.

Similar procedures were used in analyzing vegetable crop farms. The results show that if competent and timely contract services are available for the smaller vegetable farms (up to 640 acres, producing around $100,000 of total crop revenue annually), the longrun average costs for vegetable production are essentially constant throughout the size range, from very small farms to those with more than 2,400 acres of farmland (fig. 9). Results of the study indicate that when competent and timely contract services are available at current rates, the Imperial Valley vegetable farmer achieves little or no cost advantage by owning equipment. In fact, the very large vegetable farms that are equipped to operate on a large scale, but use their machinery at less than full capacity, actually have higher average cost than farms that use only contract services for all the farm operations. In a situation where contract work is not readily available, considerable cost economies occur with increasing size up to about 640 acres.

The apparent lack of any economies of size on vegetable crop farms relates in part to the high proportion of variable costs, especially for contract harvesting, incurred in vegetable crop production. Lettuce and cabbage, which together comprise 50 percent of the cropping system analyzed, account for about 75 percent of the total variable costs associated with harvesting. Harvesting lettuce and cabbage is a highly labor-intensive operation with relatively minor machine costs, under present technologies. Thus, only slight economies of size are attainable on these operations.

Kern County Cash Crop Farms

In 1963, Faris and Armstrong (36) analyzed the economies of size for cash crop farms in Kern County, Calif. They used a combination of linear programming and budgeting to determine the least-cost machinery combination and irrigation system for each farm size. The model and assumptions employed in this study are very similar to those employed in Moore's study of irrigated cotton farms in Fresno County, Calif. (89).

Three different cropping programs were considered. The cotton-alfalfa-barley milo farms achieved slightly lower average total cost per dollar of revenue than

either the cotton-alfalfa-potato farms or the cotton-alfalfa farms. Results were similar for each of these three cropping programs (table 6). Lowest average total was achieved by the 640-acre farm, with about 90 cents total cost per dollar of gross income. The 160-acre and 320-acre farms were shown to be almost as efficient, each achieving a cost per dollar of revenue within 5 cents of the minimum in each cropping program. The 1,280-acre and 3,200-acre farms were slightly less efficient than the 640-acre farms, having costs 2 to 4 cents higher than the minimum in each case.

Table 6.--Cash crop farms, Kern County, California: Total cost per dollar of crop revenue for three cropping programs

Farm size (acres)	Cost:revenue ratio for--		
	Cotton-alfalfa farms	Cotton-alfalfa-potato farms	Cotton-alfalfa-barley-milo farms
80	1.06	1.06	1.00
160	.96	.94	.93
320	.92	.91	.91
640	.91	.89	.89
1,280	.94	.93	.91
3,200	.96	.93	.92

Source: Calculated from data in Faris and Armstrong (36, table 26).

Wheat Farms in the Columbia Basin of Oregon

In a study conducted by Stippler and Castle in 1961 (123), dryland wheat-summer fallow farms in the Columbia Basin of Oregon were examined using the synthetic-firm budgeting technique. Four farm sizes representing specific labor-machinery combinations were analyzed. Three levels of machine utilization were considered in each of the four labor-machinery size groups. In each case, the lowest average cost was obtained when the machines were fully utilized; that is, were being used on as many acres as possible on a 10-hour-day basis.

Table 7 shows the average cost attained by each of these full-utilization farm plans. The 1-man wheat farms achieved lower average costs than either the 2-man or 3-man farms. The 1-man farm with a 50- to 60-horsepower tractor had a cost: revenue ratio of 0.86, and earned a $5,629 return to operator labor, management, and risk-taking. The 2-man and 3-man farm sizes had costs in excess of 90 cents per dollar of gross income, and earned less than $5,500 of net operator earnings.

This study used highly simplified procedures and assumptions. Only a narrow range of production and resource acquisition alternatives were considered. However, it appears that the size-efficiency relationships developed are a generally accurate representation of the economies of size for wheat-summer fallow farms in the Columbia Basin.

Table 7.--Columbia Basin wheat farms: Average cost and operator earnings for selected farm plans using the moldboard fallow operation

Farm size	Basic resources		Full-utilization farm plan			
	Men	Tractors	Acres	Gross farm income	Operator income	Cost:revenue ratio
Small----------	1	One 30 to 40 HP	1,000	$24,572	$3,669	0.85
Medium---------	1	One 50 to 60 HP	1,600	39,317	5,629	.86
Medium-large---	2	Two 50 to 60 HP	2,500	61,420	5,429	.91
Large----------	3	Two 50 to 60 HP, one 25 to 35 HP	3,600	88,462	5,252	.94

Source: (123, table 5).

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Results of the Crop Production Studies

The size-efficiency relationships vary widely among the 14 crop-farming situations discussed here. Although much of this variation results from differences in the assumptions and procedures used, some useful comparisons and generalizations can be made.

In the production of cling peaches in California, average cost reached a minimum with an orchard size of 90 to 110 acres when mechanized practices were used. This size of operation required one full-time man plus seasonal hired labor.

The two studies of crop farms and crop-livestock farms in Iowa showed that when full ownership of all machinery was assumed, 2-man farms were more efficient than 1-man operations. When custom hiring of certain field operations was introduced into the analysis, the cost curves for the smaller farms were lowered by about 25 percent, making the 1-man farm nearly as efficient as the 2-man farm. However, these cost reductions were attained only when the custom services were available when needed, so that crop losses were avoided. These two studies examined only a limited range of sizes: 1-man and 2-man operations. Consequently, they provided no insights into the comparative efficiency of larger farm sizes operated by three or more full-time men.

Similar results were found in the analysis of field-crop farms and vegetable farms in the Imperial Valley of California. Farm sizes extending beyond 2,400 acres were examined. Vegetable farms of less than 640 acres could produce almost as efficiently as any larger size by hiring custom work for all or most of their field operations. Among the smaller field-crop farms, custom hiring was also found to greatly reduce the average costs, but additional economies of size were found to occur up to about 1,500 to 2,000 acres.

Analysis of cash-crop farms in Yolo County, Calif., producing sugarbeets, tomatoes, milo, barley, alfalfa, and safflower showed that all the economies of size were attained at a farm size of about 600 to 800 acres. Because of institutional and crop rotation considerations, farms beyond 1,400 acres were found to experience rising average costs.

Farms producing cotton, alfalfa, milo, and barley in Kern County, Calif., were found to achieve lowest average cost at about 640 acres. Larger farms extending beyond 3,000 acres were slightly less efficient.

In the analysis of irrigated cotton farms in Fresno County, Calif., 1-man, 2-man, and 8-man operations were found to be less efficient than 4-man farms representing about 700 acres in the heavy-soils area and 1,400 acres in the light-soils area.

In two studies, larger farms were found to be no more efficient than highly mechanized 1-man farms. These 1-man farms were a 440-acre irrigated cotton farm in Texas and a 1,600-acre wheat-summer fallow farm in Oregon.

In most of these studies, all of the economies of size could be attained by modern and fully mechanized 1-man or 2-man farms. But it is often possible to increase total profit by extending beyond the most efficient size. In these cases, the incentive for

expansion to very large farm sizes is higher total profit, rather than lower average cost.

Partially counteracting the profit incentive to farm enlargement is the increasing uncertainty and difficulty of managing a larger and more complex farm. As farm size increases, complexity and management problems become particularly serious in types of farming and areas where (1) distances between workers are great, (2) land quality is uneven, (3) growing conditions and prices are unpredictable and require frequent revisions in management plans.

Beef Feedlots

Beef enterprises occur on a wide variety of types and sizes of farms. On crop-livestock farms, the beef herds range in size and relative importance from small supplementary enterprises using idle off-season labor and unsalable crop residues to large enterprises in which the beef herds provide the main source of revenue and in which crops are produced mainly as a source of feed. At the extreme end of the continuum are the highly specialized drylot beef feeding businesses that utilize very little land area and buy all their feed inputs. These specialized feeding businesses account for a large and rising proportion of the Nation's beef production. Four reports of empirical studies of specialized beef feedlots are discussed in this section.

Model Feedlots of 500-, 2,000-, and 5.000-Head Capacity in Eastern Oregon

Three levels of feedlot capacity were examined in a 1964 study by Richards and Korzan (101). This was intended primarily as a feasibility study, rather than as an analysis of economies of size. However, because of the procedures used and the feedlot sizes considered, the findings shed some light on the size-efficiency possibilities available to farmers considering initiation of a beef feeding operation.

Lots capable of holding 500, 2,000, or 5,000 head of feeder steers were included in the study. The results show that even though a 2,000-head feedlot operation is not as efficient as larger sizes, a considerable amount of net profit can usually be expected under price conditions such as those existing in eastern Oregon from 1956 to 1963.

The authors assumed an initial weight of 650 pounds and a finishing weight of 1,062.5 pounds (before shrinkage). A 150-day feeding period and a 2.75-pound average gain per day were assumed. Synthetic-firm budgeting procedures were employed, and operator management and risk-taking were used as the residual claimant. Nonfeed cost per pound of gain was the measure of average total cost. The 500-head feedlot had an average nonfeed cost of $5.38 per hundredweight of gain, compared with $4.13 and $3.32 for the 2,000- and 5,000-head operations, respectively.

Potential profits for the 2,000-head feedlot were calculated for each year from 1956 to 1963 on the basis of average prices received each year for slaughter steers. Returns to management and risk-taking ranged from a $50,000 loss (in 1963) to a $115,000 net return (in 1958). In 6 of the 8 years, profits were above $36,000.

The average annual return to management and risk-taking during the 8-year period was about $43,000.

Actual and Synthetic Feedlots in California

Hopkin analyzed the economies of size in California beef feedlots in 1958, calculating average cost curves both from actual firm records and from synthetic-firm budgets (64). Basic data were obtained from a random sample of 77 feedlots widely distributed around the State. The sample data were separated into six size classes, according to feedlot capacity.

In the actual-firm analysis, a quadratic least-squares regression curve was fitted to the observations for all the firms in each size class. This equation expressed nonfeed cost per head per day as a function of the feeding ratio.

For the synthetic-firm analysis, a model feedlot was designed to represent each size class. The average characteristics of all the observed firms in each size class were used as if they were the actual record of a single firm with capacity set at the group average. The feeding ratio was then allowed to vary from one budget to another, from one-third to full utilization of the facilities. One point on the synthetic firm's shortrun cost curve was derived from each budget. A curve was then drawn approximately through the plotted points. A 120-day feeding period was assumed, and each lot was assumed to operate continuously and at the same capacity throughout the year.

The shortrun average cost curves obtained from actual firm records and from synthetic-firm budgets are quite similar, indicating that with a given size of plant the average nonfeed cost declines sharply as the feeding ratio, or degree of plant utilization, is increased. Both the synthetic-firm analysis and the actual-firm analysis provide evidence of a downward-sloping longrun average cost curve.

Average cost was measured as nonfeed cost per head per day, less a credit of 0.88 cents for manure. For the smallest class of feedlots, those with less than 1,200-head capacity, average cost was 11.77 cents nonfeed cost per head per day. These small feedlots fed an average of less than 800 head per year. Average cost was found to decline steadily as feedlot size increased. The largest size class included feedlots with more than 14,000 head capacity, feeding an average of more than 35,000 head per year. These large feeding operations achieved an average cost of only 7.69 cents, roughly one-third less than the average cost of the smallest class.

The synthetic-budgeting results showed approximately the same size-efficiency relationship as the actual-firm analysis because average or typical plant characteristics were budgeted. If the budgets had been based on advanced technologies and above-average practices, the two relationships would probably have been quite different.

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Model Feedlots With More Than 3,000-Head Capacity, Imperial Valley, Calif.

Cost analyses can be conducted using various degrees of abstraction of actual firm characteristics. At one extreme are studies such as the preceding one by Hopkin in which firms are synthesized to reflect every detail of the average or typical plants found in various size classes. This procedure produces size-efficiency relationships that are geared to presently existing practices and facilities, many of which were initiated long ago and have become outdated. At the other extreme are studies using the economic-engineering approach (73). In this approach, various firm sizes are budgeted with no regard for average or typical situations, except to assure that the arrangements are feasible and realistic. This method produces results that are relevant to the firm in its planning stage, when the entrepreneur seeks the specifications of various plant sizes, and is interested in a comparison of the efficiency and profit attainable with each size. Presumably the planning entrepreneur is concerned with the most efficient and profitable plant designs in each size class, rather than typical or average situations based partly on outdated technology. King's 1962 study of feedlots in the Imperial Valley, Calif., is an excellent example of the economic-engineering (synthetic-firm) type of budgeting analysis (73).

Average nonfeed cost was found to decline from 7.19 to 5.57 cents per head per day as the number of cattle on feed at one time increased from about 11,000 to 68,00 head (fig. 10). During a 120-day feeding period, this cost reduction would result in a savings of nearly $2 for each steer fed. These average cost figures are based on ful utilization of the feeding facilities, with all the pens filled to capacity during three 120-day feeding periods each year. Alternatively, if these model feedlots are operated throughout the year with pens partly empty, average costs rise sharply. For example, if the largest of the model feedlots is operated all year with the pens only 60 percent full, average nonfeed cost rises from 5.57 to 6.79 cents per head per day (table 8). This amounts to a difference of nearly $1.50 per head for a 120-day feeding period.

King also examined another kind of plant underutilization, in which the pens are kept full only part of the year and the operation is closed down during the remainder of the year. This kind of underutilization also increases average cost per unit. For example, consider a feedlot designed for 6,000-head capacity. If this plant were fully utilized throughout the year using a 120-day feeding period, approximately thre batches of feeder cattle could be fed and the average nonfeed cost per head per day would be 6.8 cents. But if the operation were closed down after the first batch, average cost would nearly double, rising to 12.6 cents. Thus, the benefits of large scale operation may be offset if the facilities are operated at less than full capacity.

Each of the five model feeding operations was organized to provide full utilizati of a specific size of mill; the five mill sizes had rated capacities of 5, 10, 15, 20, a 30 tons per hour. Five model feedlots with designed capacities of 3,760, 7,520, 11, 15,038, and 22,556 head, respectively, were synthesized on the basis of data from sample of feedlots and from other sources. Mill construction costs and specificatio were obtained from a feed mill construction firm. Cost rates for electricity, labor and other inputs were set at locally prevailing rates and checked for consistency against the feedlot sample data. A sample of 12 large feedlots in the Imperial Vall of California provided information regarding requirements for equipment, labor, veterinarian's services, medicine, and various other input data.

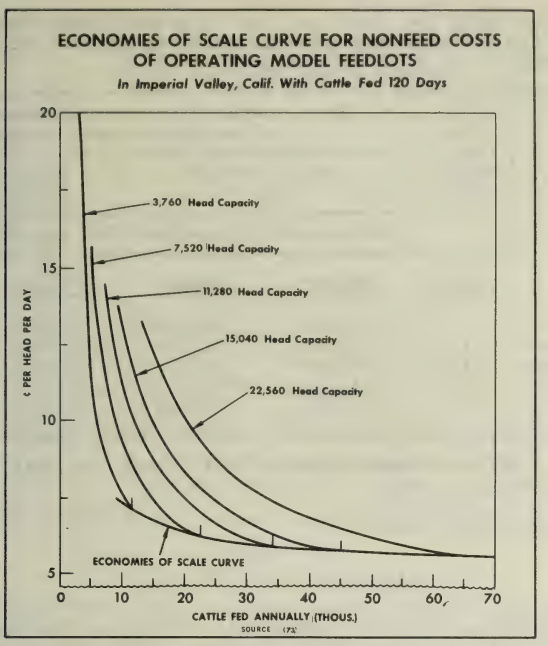

Figure 10

The costs of fixed items such as taxes, insurance, depreciation, interest, management, and office expenses were tabulated separately as a series of lump sums. Cost items that varied with the number of head fed or the tonnage of feed fed were treated as variable costs. These included electricity, equipment repairs, gas and oil, telephone, death loss, veterinarian's services, medicine, and labor other than management and office staff. Total annual cost of each variable resource was calculated as a linear function of either the number of animal days (number of days of operation per year times average number of head on feed at a given time), or the total tonnage of feed fed. Since the amount of feed fed per head per day was assumed to be constant in this analysis, it was possible to convert these linear cost functions from one form to the other. In this way, average cost could be presented as a function of either animal days or tonnage of feed fed.

The costs derived in this study are lower than those derived in the Hopkin study by about 1.5 cents per head per day. The model feedlots were assumed to operate at 70 percent of maximum capacity for this comparison. This cost difference results primarily from the fact that King's budgets reflect better-than-average or advanced technology and practices, while Hopkin's budgets are based on average or typical situations.

Table 8.--Nonfeed cost per head per day for model feedlots operating at full capacity and at 60 percent of capacity in the Imperial Valley of California

Feedlot capacity, head on feed at one time	Feed-mill capacity per hour	When operated at various percentages of maximum annual outputs			
		Cattle fed per year 1/		Average cost 2/	
		100 percent	60 percent	100 percent	60 percent
	Tons	Number	Number	Dollars	Dollars
3,760	5	11,280	6,768	7.19	9.33
7,520	10	22,560	13,536	6.18	7.75
11,280	15	33,840	20,304	5.92	7.35
15,040	20	45,120	27,072	5.75	7.08
22,560	30	67,680	40,608	5.57	6.79

1/ Assuming a 120-day feeding period and 3 lots per year.
2/ Cents per head per day.

Source: (73, tables 9 and 10).

Model Feedlots in Colorado

A study of feedlots in Colorado completed by Hunter and this writer in 1965 employed essentially the same analytical techniques as King's study, with some modifications and extensions. Feedlot capacities ranging from 135 to 15,300 head were examined (65).

When all resources including the operator's labor were charged at going marke rates, the model feedlots effected important savings by owning a feed mill of a size appropriate to the scale of the operation. For example, for a feedlot with a 3,150-head capacity feeding operation, a 15-ton-per-day feed mill provided lower average cost than equipment combinations having no feed mill or than any of the larger sizes of mill considered (65, fig. 6). Even with a very small feedlot designed with only 135-head capacity, an 8-ton mill provided lower average nonfeed cost than any of the nonmill equipment combinations considered. As more feeding space was added and more cattle were fed with this 8-ton mill, average cost dropped sharply, reaching a minimum at 1,500-head capacity. Beyond 1,700-head capacity, feeding operations that used this small feed mill had higher average nonfeed cost than operations using the larger mills (fig. 11).

The size of feed mill that provided the lowest possible average cost per head fed per day and per hundredweight of gain is shown for various feedlot sizes in table 9 It was assumed that each steer gained an average of 2.57 pounds per day during a 169-day feeding period, and that the feedlots were kept essentially full throughout the year. These cost data indicate the average cost of owning and operating various sizes of feeding operations, excluding the cost of feed and feeders, which are assum to be constant and, therefore, not to affect economies of size.

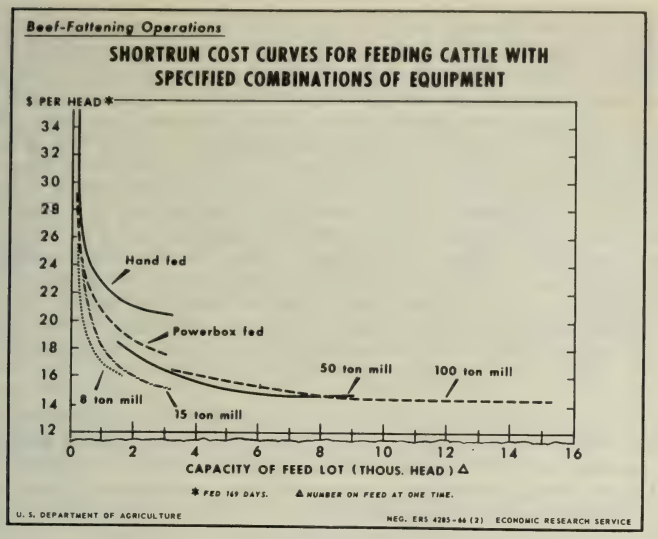

Figure 11

Table 9.--Economies of size in feeding yearling steers in Colorado

Size of feedlot (head on feed at one time)	Size of least-cost feed mill per 8-hour day 1/	Least-cost point			
		Feedlot size	Average total cost		
			Per head fed		Per pound of gain
			169 days	Per day	
	Tons	Head	Dollars	Cents	Cents
135 to 1,700------	8	1,500	16.37	9.7	3.8
1,700 to 4,000----	15	3,500	15.15	9.0	3.5
4,000 to 9,000----	50	8,100	14.66	8.7	3.4
9,000 to 15,300---	100	15,300	14.10	8.3	3.2

1/ Each of the least-cost equipment combinations includes powerboxes rather than hand-scoop shovels for distributing the feed into the feed bunks.

Source: (65).

The small model feedlots with a capacity for 135 to 1,700 head on feed at one time operated most efficiently using an 8-ton feed mill and powerboxes to distribute the feed into the bunks. Feedlots in this size range were designed to be operated by one or two men. The average cost for a 1,500-head feeding operation was 3.8 cents per pound of beef gain. For larger feedlots having between 1,700 and 4,000 head on feed at a time, the 15-ton feed mill was most efficient; in the 4,000- to 9,000-head size range, the 50-ton mill was most efficient. Beyond 9,000-head capacity, the 100-ton mill was most efficient, providing an average cost of only 3.2 cents per pound of gain for a feedlot with 15,300 yearling steers on feed at a time. This was only slightly more efficient than the 1,500-head operation using an 8-ton mill--a difference of only 0.6 cent per pound of gain. These findings indicate that the technical economies of size attained by feedlots feeding over 1,500 head are too small to have any appreciable effect on the average cost of producing beef or, consequently, on the wholesale and retail prices of beef. A slight variation in the purchase price of feed or of feeder cattle, or in the sale price of fat cattle, could exert a considerably stronger effect on average cost and the profit margin.

However, the slight gain in efficiency attributable to economies of size is quite significant in terms of the overall cost and profit of a large feeding operation. For example, because of this 0.6 cent difference in average cost, a feeding operation handling 15,000 head of steers at a time would have considerably lower total costs--a savings of more than $70,000 annually--using a single feedlot with a 100-ton feed mill instead of ten 1,500-head feedlots each using an 8-ton mill.

When prices are favorable, large feeding operations realize very high profits. But when prices are unfavorable, they incur sizable losses.

The model feedlots were also analyzed for operation at less than full capacity. The results indicate clearly that the advantages of large-scale operations are attaine only when the facilities are fully utilized. Excess capacity in the mill or feedlot facilities greatly increased average total cost.

The basic data were obtained chiefly from a sample survey of feedlots and fron feed mill construction firms. Four mill sizes were considered, with rated capacitie of 8, 15, 50, and 100 tons of feed per 8-hour day, according to manufacturer's speci fications. For each mill size, various levels of feeding space and the associated fac ties were examined, ranging from a relatively small feeding capacity to sizes that re quired using the mill beyond its rated capacity. In cases involving overutilization, additional use-depreciation and overtime pay were assumed to occur.

Some of the smaller feedlots were designed without feed mills, and it was assumed that commercial feed mills would process and mix all the grain and co centrates fed to the cattle. These small feedlots were designed with two altern tive equipment systems. Both systems used tractor loaders and grain augers fo loading the feed trucks. But one system used hand-scoop shovels for unloading the feed trucks into the feed bunks, and the other used powerboxes (self-mixing, self-unloading feed units mounted on trucks). Four other equipment combinations were designed, each having a specific size of operator-owned feed mill to process, mix, and load the grains and supplements into the feed trucks. All four of these mill com binations used trucks with powerboxes to distribute the feed into the feed bunks. Fee lot areas with capacities ranging from 135 to 15,300 head of yearling steers were analyzed in conjunction with the six specific equipment combinations. Several realis tic combinations of feedlot area and complements of equipment were analyzed.

Throughout the entire range of feedlot sizes analyzed here, least-cost operation was achieved by the operator owning an appropriate size of feed mill, rather than hiring the concentrate mixing done by a commercial mill, and using powerboxes rather than hand scoops to distribute the feed into the feed bunks.

In the basic analysis, the feeding area was assumed to be fully utilized throughout the year. The feed mill was allowed to operate at less than full capacity in cases where the assumed pen capacity was less than mill capacity. Herein lies one of the basic differences between this study and King's study. King viewed the fixed plant as being both the mill and the feeding facilities, whereas we assumed a slightly longer planning horizon, considering only the mill as fixed and allowing the quantity of feedlot area and feeding facilities to vary. In both studies, points on the shortrun cost curves represent various degrees of utilization of the fixed plant. In each study, a smaller number of cattle fed per year implies a lesser degree of utilization. However, as King reduced the number of cattle fed, he held pen capacity constant, at the level corresponding to the largest potential feeding capacity of the mill. This amounted to varying the feeding ratio--the number of head fed per year for each 1-head unit of feeding space, assuming a given length of feeding period. In our Colorado study, as the number of cattle fed was reduced, the feeding area was reduced accordingly, with mill size held fixed. Thus, the feeding ratio was held constant.

This divergence in procedures and assumptions alters the shape of the shortrun average cost curves. King's curves are steeper than ours, because his concept of underutilization allowed excess capacity in both the mill and the feeding facilities; in our procedure only the mill was allowed to operate at less than full capacity. Both procedures are correct for their respective planning horizons. In the longrun setting, where all resources are allowed to vary, both procedures give identical results. An envelope curve drawn tangent to the shortrun average cost curves will have the same shape and height, regardless of the planning horizon selected for examination of shortrun situations.

Results of the Four Feedlot Studies

One general conclusion can be drawn from these studies. For feedlots above a moderate size, say 1,500- to 5,000-head capacity, the technical economies of size attainable are relatively unimportant--only $1 to $2 per head fed. These relatively small savings can be easily surpassed by a small difference in the price of feed or feeder cattle. A feedlot operator whose operation is small enough to allow him to "shop around" and save a dollar a ton on his hay price, for example, or 50 cents a hundredweight on his feeder cattle, can often realize much greater savings in this way than are attainable through the technical economies of size. Thus, the possible pecuniary (buying and selling) economies and diseconomies of size may be very important in explaining changes in the beef feeding industry.

Dairy Farms

The emergence of new forage production technologies, milking parlor systems, and housing arrangements in recent years has opened up new possibilities of economies of size in dairying. Availability of these new and efficient techniques and the increase in wage rates have augmented the interest of dairy farmers and others in

the question of economies of size. Changes in the size distribution of dairy farms have led to concern over concentration of production and its effect on the survival of small dairy farms. For the country as a whole, the number of dairy farms having fewer than 20 milk cows decreased sharply during the 1950's. Meanwhile, the number of dairy farms with 30 to 99 milk cows increased by more than 90 percent, and the number with 100 milk cows or more increased by 82 percent (table 10). Thus, the strongest percentage increases occurred among the herds of medium size--30 to 99 head--while the very large dairy herds remained few in number.

These facts raise a question concerning the economies of size in dairying. Four economies of size studies for dairy farming are summarized and interpreted here.

Table 10.--Changes in sizes of dairy farms, United States, 1950-59

Number of milk cows	Farms having specified number of milk cows		
	1950	1959	Percentage change
	Number	Number	Percent
1 to 19	3,465,526	1,571,496	-54.7
20 to 29	119,259	140,714	+18.1
30 to 49	46,799	89,315	+90.8
50 to 74	10,209	22,336	+118.8
75 to 99	2,871	5,604	+95.2
100 or more	3,593	6,551	+82.3
Total	3,648,257	1,836,121	-49.7
500 to 999	N.A.	177	N.A.
1,000 or more	N.A.	34	N.A.

Source: (130, table 26).

New England Dairies

A study conducted by Fellows, Frick, and Weeks in 1952 was designed partly as a means of testing the synthetic-firm budgeting technique in examining economies of size (39).

Model New England dairy farms with 35 or more milk cows were found to have significantly lower average total cost per unit of output than the smaller dairy farms under the prices and technologies applicable in 1952. The average cost curve was

approximately flat from the 1-man, 35-cow farm to the 3-man, 105-cow farm. These results are consistent with the broad changes in the size distribution of New England dairy farms during the 1950's. The number of farms in that area having less than 20 milk cows decreased steadily during the decade. Number of farms with 20 to 29 cows declined only slightly. Farms with 30 to 49 cows increased by nearly 50 percent, and farms with 50 cows or more doubled in number (128, pp. 528-529).

This study provides a good example of budgeting analysis employing a variety of assumptions about the residual claimant and the cost of the operator's labor and management. Three alternative forage harvesting techniques were considered, along with two alternative wage levels ($1,500 and $2,000) for regular hired labor. The residual claimant was initially assumed to be entrepreneurship. Operator labor and management were initially valued at $2,000 per year, but this value was also set at levels varying from zero to $4,000 for purposes of comparison. Figure 12 shows the resulting average total cost curves using alternative schedules for the cost of the operator's labor and management.

Curve 1 shows how average cost varies with size of dairy farm when the cost of the operator's labor and management are held constant at $2,000 per year for all sizes. The left-hand portion of the curve is quite high, because the fixed costs are spread over relatively few units of output. As the size of firm increases, the curve falls sharply, reaching a minimum of $2.64 per hundredweight of milk on the 2-man farm with 70 milk cows.

Curve 2 shows that when the opportunity cost of the operator's labor and management increases with farm size, the 1-man, 34-cow dairy achieves an average total cost that is within a few cents per hundredweight of that achieved by larger

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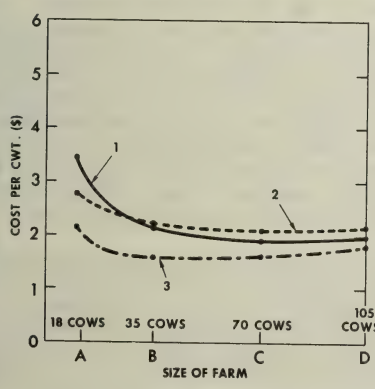
New England Dairy Farms Harvesting Field Chopped Hay and Grass Silage



	SIZE OF FARM	ASSUMED RETURN TO OPERATOR LABOR AND MANAGEMENT		
		1	2	3
A	ONE MAN (PARTIALLY EMPLOYED)	$2,000	$1,000	NONE
B	ONE MAN (FULLY EMPLOYED)	$2,000	$2,000	NONE
C	TWO MEN (FULLY EMPLOYED)	$2,000	$3,000	NONE
D	THREE MEN (FULLY EMPLOYED)	$2,000	$4,000	NONE

SOURCE (39)

Figure 12

farms. The budget costs underlying curve 2 are identical to those of curve 1, except that the opportunity cost of the operator's labor and management is varied from $1,000 to $4,000 as the size of firm increases. Implicit in this cost schedule is the assumption that (a) a farmer who operates a large dairy has a higher opportunity cost or reservation price than one who operates a smaller dairy, or (b) an operator places a higher reservation price on his management services for coordinating and supervising a large dairy than for operating a small one. The average cost curve (curve 2) resulting from this assumption is considerably flatter than curve I, where the cost of the operator's service is kept constant at $2,000.

Curve 3 is based on the operator's personal services valued at zero, implying that the residual claimant now includes operator labor and management as well as risk-taking. This is the shortrun cost curve as viewed by a dairyman who places no reservation price on his own labor and management and considers his opportunity cost to be zero because of limited employment possibilities. This is also the relevant average shortrun cost curve for a person with a full-time off-farm job, who uses the dairy enterprise as a supplementary source of income. In this case, the operator would correctly value his personal services at zero in calculating the average total cost of producing milk, if he places no reservation on the time he spends on the dairy enterprise. Curve 3 reaches its minimum point of $2.21 per hundredweight of milk with the 1-man, 35-cow dairy farm. The farmer could remain in production indefinitely, meeting all out-of-pocket costs and depreciation, if the price remained at this level. But he would receive no return for his labor, management, and risk-taking. Family living expenses and debt repayment would have to be met from the return to owned capital and from other sources.

Iowa Dairy-Cash Grain Farms

A study conducted by Barker and Heady in 1960 considered 1- and 2-man farms in Iowa producing milk and cash-grain crops (3). Herd sizes up to 64 cows were analyzed using linear programming to select the optimum crop rotation. Technologies analyzed included the stanchion barn system and four parlor systems: 4-abreast, stanchion parlor, 3-stall, 6-stall, and herringbone. The residual claimant included operator management and risk-taking. It was found that, on a 1-man farm with 14 co 156 acres of corn-corn-oats-meadow rotation, and $77,000 of capital (including live stock), gross income would just cover all costs--including the opportunity cost of th operator's labor valued at $2,500 per year, plus 5 percent interest charged for fixe capital and 7 percent for operating capital. With this size of farm, the operator wo be fully employed, and expansion in farm size would require hiring another full-tim worker. The wages of a hired man were assumed to be $2,500 a year.

The 2-man farm achieved the break-even point at a herd size of 24 cows, with 300 acres of cropland and more than $100,000 of investment. Beyond this size average cost continues to decline sharply until a herd size of 32 cows is reached (fig. 13). At this size, the cost:revenue ratio is slightly over 0.90, and most of the cost economies have been attained. Only a slight reduction in the cost:revenue rati is experienced as farm size is expanded to 58 cows, 470 acres of cropland, and $192,000 of capital. Beyond this size, with the labor supply held at 2.25 man-year the average cost curve for the Iowa dairy-cash grain farm turns upward.

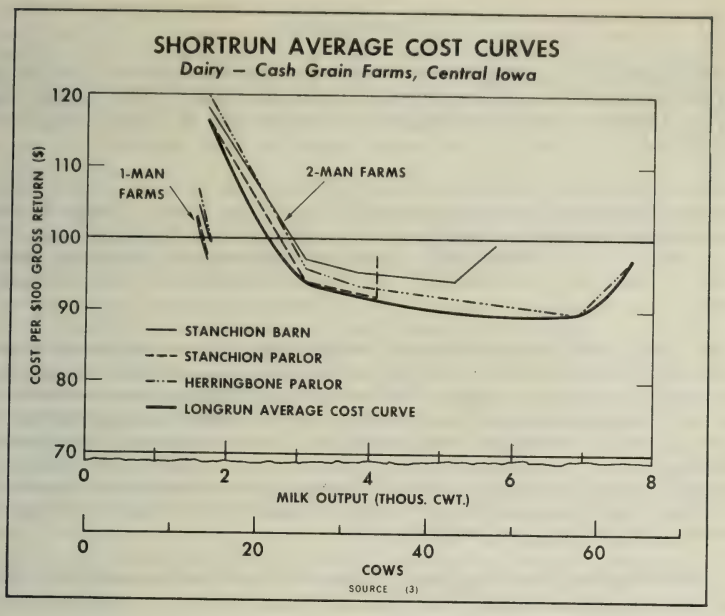


Figure 13

Very small farm sizes are depicted as being quite inefficient. This is partly because the firm is viewed in the conventional way, as simply a producer of farm products. Consequently, the cost of the operator's labor ($2,500) and the cost of the other fixed resources are spread over relatively few units of output, leading to a high average total cost. This formulation is correct for farmers who operate small farms and have no other source of income. But in real life, the operators of many such small dairy farms also engage in some custom work or have off-farm jobs. If the small dairy farm is viewed as a goods-and-services firm, not all of the annual cost of the operator's labor would be necessarily charged against the farm enterprises.

Taking all these income sources together, the small dairy farm in real life probably is not as inefficient as the sharply sloping envelope curve would imply. Nonetheless, the number of Iowa farms with fewer than 30 milk cows decreased sharply during the 1950's, while the number with 30 to 74 milk cows nearly tripled. Large dairies (75 cows or more) increased by only 38 percent during the decade (128, pp. 528-529).

Arizona Dairies

Martin and Hill in a 1962 study attempted to provide an insight into the nature of the right-hand portions of the envelope curve for dairies (84). Dairy farms ranging in size from 30 to 611 cows, with a labor supply of from 1 to 13 men, were surveyed.

Initially, average costs were calculated for synthetic dairy firms, assuming management and production per cow typical of each size group. Figure 14 shows that the average costs (curve 5) declined sharply up to a herd size of about 150 head, falling gradually to a minimum of $4.86 per hundredweight of milk for a herd size of 250 to 350 head, and then rose to $5.27 per hundredweight as herd size approached 600 head.

For comparison, the budgets were recalculated, assuming above-average management and holding production at 12,000 pounds per cow, but still using the barn system typical of each size group. The resulting average cost curve (curve 4) was considerably lower and flatter than with typical management and production, reaching approximately minimum average cost of $4.68 per hundredweight at a herd size of 150 head, with a 3-man labor force. Average cost was found to be nearly constant over a wide range of farm sizes, from 150 cows to the largest size analyzed (600 cows with the labor supply varying from 3 to 12 men, and with value of investment rising from about $100,000 to more than $350,000.

To establish the characteristics of the synthetic firms, a total of 37 carefully selected dairies were arranged in six size groups, depending on each dairy's milk

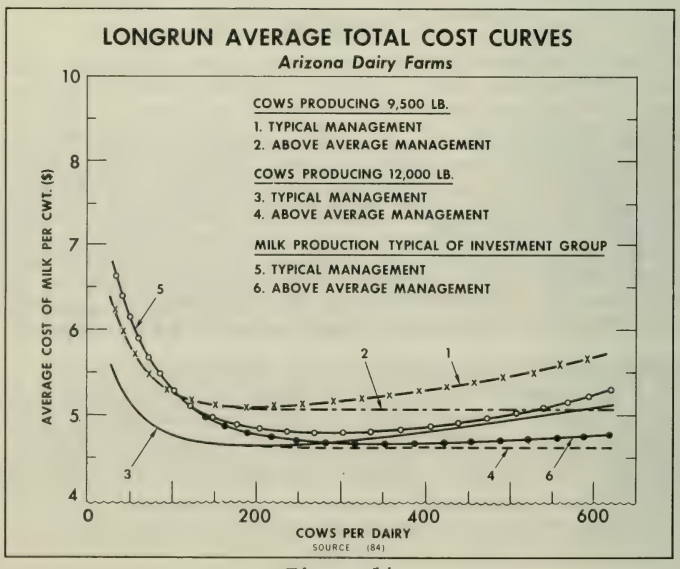


Figure 14

base (quota). Typical combinations of land, improvements, and dairy equipment were used to form a "representative" dairy farm for each of the six size categories. Each typical situation was adjusted to eliminate excess capacity, based on the carrying capacity of the milk barn and bulk tank. Investment costs used in calculating interest, depreciation, taxes, and insurance were based on current replacement costs. Yearly salary for hired labor was calculated at $4,800, including perquisites of about $725. Operator labor and management were included with risk-taking in the residual claimant.

Production per cow and cow prices were found to vary with herd size. A variety of assumptions were employed in the budgeting analysis to indicate cost curves with high-producing versus low-producing cows.

Survey data indicated that management difficulties typically began occurring near a herd size of 150 to 175 cows. This problem was manifested in three ways: (1) Feed waste increased with herd size; (2) it became difficult to vary the level of grain feeding relative to each cow's production as additional cows were added, because of the variation among cows, and (3) the manager's supervision and coordination duties became so difficult as the herd size and labor force increased that he had no time to look for savings in purchasing feeds. This seems to be an example of diseconomies of size. However, if the herd sizes and resource situations examined in this study had included the possibility of hiring additional management services and specialized purchasing personnel, some of these management problems might have been overcome, though probably with some rise in management costs. Type of milking barn on the survey farm varied with herd size. Stanchion barns were typical of dairies with fewer than 100 cows. Bucket-type milking machines were used on dairies ranging from 30 to 60 cows. Dairies with 60 to 100 cows used pipeline instead of bucket milkers. Milking parlors were typically found only on farms with more than 100 cows. The 3-stall, side-opening parlor was commonly used by 100- to 150-cow dairies. Walk-through parlors were used by most of the dairies with from 150 to over 600 cows. These typical milking barn systems were assumed in constructing the budgets for the different dairy sizes.

The analysis did not consider alternative milking-barn technologies for each size group. The herringbone parlor was not considered for any size group. Results of other studies indicate that even for dairies as small as 40 cows the milking parlor is considerably more efficient in the long run than the stanchion barn, and that the herringbone parlor is more efficient than other parlor systems in many cases (17, 3). Therefore, the envelope curve which the planning firm in Arizona should consider is probably lower and flatter than suggested by the curves presented here, which reflect "typical" barn technologies for each size group. Employing advanced technology, the Arizona dairy farmer could probably achieve highly efficient production and realize most of the economies of size at a much smaller herd size than the 150-cow size indicated in this study.

Even so, the cost-efficiency relationships derived in this study are consistent with trends shown in the 1959 Census of Agriculture (128). The number of Arizona farms having less than 75 milk cows declined sharply during the 1950's, the number of farms with 75 to 99 cows remained stable, and dairies with 100 head or more tripled in number, rising from 40 to 126 farms. In 1959, five Arizona dairies had more than 500 cows.

Minnesota Dairies

Buxton conducted a completely synthetic analysis of Minnesota dairy farms in 1964, using linear programming to select the least-cost complement of machinery and the optimal farm plans for herd sizes up to 90 cows (17). 22/ Alternative farm enterprises considered were hogs, corn, and soybeans. The dairy enterprise accounted for at least 60 percent of gross income on the synthesized dairy farms. Several alternative housing and milking arrangements were considered. One-man systems included stanchion barns and three sizes of herringbone parlors (double-4, double-5, and double-6). The only 2-man system analyzed was a double-8 herringbone parlor. Operator labor and management were included with risk-taking in the residual claimant.

Virtually all the economies of size were achieved by a 1-man, 48-cow dairy, using a double-6 herringbone milking parlor (fig. 15). The farm plan called for more than $160,000 of investment capital, including 290 acres of land and a 3-plow tractor and complement of machinery. Average total cost per dollar of gross income was about $0.84 at this point, with a total return to the operator's personal services of almost $5,600.

The 2-man dairy achieved a slightly lower cost:revenue ratio of 0.82 with an 87-cow, 490-acre dairy farm. Net operator income was about $11,000 and resource requirements included more than $260,000 of investment capital.

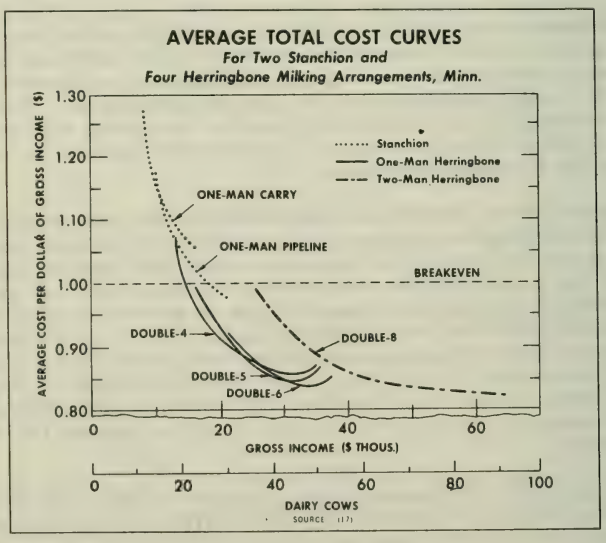


Figure 15

22/ Buxton is currently examining larger dairies--over 90 cows.

These results are relevant to the planning dairyman, because the analysis considered the highly efficient new milking-parlor technologies. The 1-man dairy can achieve considerable reductions in average cost by expanding herd size to about 48 cows. Only slight reductions are achieved as herd size is doubled and a regular laborer is hired. But because of larger volume, the total profit accruing to the 2-man dairy is about double that accruing to the 1-man unit.

During the 1950's, the number of Minnesota farms with fewer than 20 milk cows declined sharply. Number of farms with 20 to 29 head nearly doubled, and those having 30 to 99 milk cows quadrupled. The number of very large dairies remained small: in 1959, there were only 49 Minnesota farms with 100 or more milk cows, compared with 25 farms in 1950. Thus, it appears that although many Minnesota dairy farms are tending toward the more efficient and more profitable herd sizes, very few are venturing beyond the 100-cow size.

Results of the Four Dairy Studies

Results of the four studies discussed in this section are not directly comparable. First, the assumptions and procedures varied from one study to the next. Different depreciation schedules, salvage values, interest rates, and other input prices were used, and the studies varied as to whether operator labor and management were included in the residual claimant. Second, no common measure of average total cost is available. The cost per hundredweight of milk as presented in the New England and Arizona studies is not directly comparable with the cost:revenue ratio of the multiple product farms analyzed in the Iowa and Minnesota studies. Calculating the cost per hundredweight of milk for a multiple-product farm (as in the Iowa study) involves an arbitrary allocation of fixed costs to the dairy enterprise. Several alternative (and equally valid) criteria for allocating fixed costs are available, and each may give a slightly different answer. This difference in procedure further confounds the comparisons.

A third and more serious reason why the results of these four studies cannot be directly compared is that they differed in the degree to which the synthetic-firm economic-engineering approach was used. The Iowa and Minnesota studies considered modern milking parlor arrangements for all dairy sizes, not limiting the resource combinations to those found on existing farms. The Arizona study considered only the typical barn technologies for each size group as they were observed in the sample dairies. Likewise, the New England study considered only those technologies in use at the time (about 1950); these results are not applicable to today's planning firm.

The Iowa and Minnesota studies examined 1-man and 2-man dairies with herd sizes of less than 100 cows. Most of the economies of size were found to be attainable by a 40- to 50-cow dairy farm, provided the operator had sufficient management ability and could gain control of more than $150,000 of investment capital. The Minnesota study indicated that the 1-man dairy farm could realize little, if any, increase in efficiency by doubling farm size and hiring an additional worker, but the increase in volume would give rise to considerably higher profit.

In examining larger dairy farms, the Arizona study showed that resource variability became troublesome with a herd size of about 150 head, as it became difficult for the manager to see that each cow was fed according to her production. Also, as the supervision and coordination problems increased with the size of herd and the labor force, management experienced increasing difficulty in coping with feed price uncertainty, because there was not enough time for "shopping around" in buying feed. Thus, the larger Arizona dairies show how resource variability and uncertainty lead to serious problems for the limited coordination and supervision resources in the individual firm.

None of the empirical studies considered the possibility of hiring additional management resources. Nor did they consider the use of modern milking and housing systems for very large dairy farms. We do not yet know whether the increased complexity of a large, modern, well-organized dairy farm would require disproportionate increases in management inputs and costs. However, the 1959 Census of Agriculture (128) shows that the number of 30- to 100-cow dairies is increasing more rapidly than the number of larger dairies, and that relatively few firms are attaining the very large herd sizes. Thus, the survivorship principle (that only the most efficient sizes survive in the long run) suggests that very large dairies are not inherently more efficient than medium-sized dairies.

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FARMWORKERS IN RURAL AMERICA, 1971–1972

HEARINGS

BEFORE THE

SUBCOMMITTEE ON MIGRATORY LABOR

OF THE

COMMITTEE ON
LABOR AND PUBLIC WELFARE
UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST AND SECOND SESSIONS

APPENDIX

PART 5B

Printed for the use of the
Committee on Labor and Public Welfare

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PART 5B

Printed for the use of the
Committee on Labor and Public Welfare

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1972

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Format of Hearings on Farmworkers in Rural America

The Subcommittee on Migratory Labor conducted public hearings in Washington, D.C., and in San Francisco and Fresno, Calif., during the 92d Congress on "Farmworkers in Rural America." These hearings are contained in the following parts:

Subject matter	*Hearings dates*
Part 1: Farmworkers in Rural Poverty	July 22, September 21 and 22, 1971.
Part 2: Who Owns the Land?	November 5, 1971.
Part 3: Land Ownership, Use and Distribution:	
A. San Francisco	January 11, 1972.
B. Fresno	January 12, 1972.
C. San Francisco	January 13, 1972.
Part 4: Role of Land-Grant Colleges:	
A	June 19, 1972.
B	June 20, 1972.
Part 5: Appendix: A and B.	
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[Excerpts from "The People Left Behind." A Report of the President's National Advisory Commission on Rural Poverty, September 1967, Washington, D.C.]

THE PEOPLE LEFT BEHIND

A Report by the President's National Advisory Commission on Rural Poverty

Washington, D.C.

Issued September 1967

(35 55)

To The President:

We have the honor to submit to you, through your Committee on Rural Poverty, the Report of the National Advisory Commission on Rural Poverty. This is in response to your instructions to the Commission as given in Executive Order 11306 of September 27, 1966.

You will note from the signatures below that this Report was unanimously approved by the members of the Commission.

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Task of the Commission

In the President's Executive Order No. 11306, the National Advisory Commission on Rural Poverty was charged with the following responsibilities:

To make a comprehensive study and appraisal of the current economic situations and trends in American rural life, as they relate to the existence of income and community problems of rural areas, including problems of low income, the status of rural labor, including farm labor, unemployment and underemployment and retraining in usable skills; rural economic development and expanding opportunities; sources of additional rural employment; availability of land and other resources; adequacy of food, nutrition, housing, health, and cultural opportunities for rural families; the condition of children and youth in rural areas and their status in an expanding national economy; the impact of population and demographic changes, including rural migration; adequacy of rural community facilities and services; exploration of new and better means of eliminating the causes which perpetuate rural unemployment and underemployment, low income and poor facilities; and other related matters.

To evaluate the means by which existing programs, policies, and activities relating to the economic status and community welfare of rural people may be coordinated or better directed or redirected to achieve the elimination of underemployment and low income of rural people and to obtain higher levels of community facilities and services.

To develop recommendations for action by local, State or Federal governments or private enterprise as to the most efficient and promising means of providing opportunities for the rural population to share in American's abundance.

Preface

In the Economic Opportunity Act of 1964 the Congress declared it to be the policy of the United States to obliterate poverty.

Since that date, antipoverty programs of unusual scope and variety have been developed and put into effect by Federal, State, and local governments and by numerous private organizations representing business, labor, church, and other interested groups. Many of these programs have had a significant effect. A heavy burden of poverty remains, however.

Most of the antipoverty effort has been aimed at urban poverty. Few of the new programs have had a major impact on rural America. Yet, as President Johnson indicated by his Executive order creating the National Advisory Commission on Rural Poverty, the problem of poverty in rural areas is so acute as to require immediate and special attention. The heavy migration from rural America to the blighted areas of our major cities clearly shows how bad economic and social conditions are in rural areas.

This Commission has assembled the facts of rural poverty and on the basis of these facts has made specific recommendations calling for major changes in our antipoverty programs. The Commission's objective is both to give immediate aid to the rural poor and to attack the causes of their poverty.

Chapters 1 and 2 of this report focus sharply on current conditions in rural America and on the urgent need for action. The relationship between the poverty in our central cities and in rural areas is clearly established, and the Commission emphasizes the futility of attempts to solve the urban problem without comparable efforts to solve the rural problem.

Chapters 3 through 14 examine specific rural problems—unemployment, health, education, housing, deteriorating communities, existing government programs—and suggest both new programs and changes in current ones. The Commission's recommendations call for specific action by all units of government—local, State, and Federal—as well as by private groups and individual citizens.

Before framing its recommendations the Commission obtained information from numerous sources, public and private. The firsthand testimony of the rural poor was sought and obtained at public hearings. The Commission's staff assembled and analyzed data made available by numerous institutions, including Federal, State, and local agencies. Also members of the staff and leading authorities outside the staff conducted original research for the Commission.

In three public hearings the Commission received oral testimony from 105 witnesses. In addition, many papers were submitted for the record. These hearings were conducted at Tucson, Ariz., on January 26 and 27, 1967, at Memphis, Tenn., on February 2 and 3, and at Washington, D.C., on February 15, 16, and 17. The Commission also heard testimony at Berea, Ky., on conditions in eastern Kentucky, and in Puerto Rico and the Virgin Islands. Verbatim transcripts of the hearings will be published.

In addition, the Commission has made arrangements with some of the best qualified students of rural poverty in the United States to prepare 45 technical

papers on specific aspects of the problem. Some of these background papers will be published later in a separate volume.

In its meetings the Commission deliberated as a body to assess the facts of rural poverty and to arrive at its recommendations. The Commission was given detailed information on each facet of the rural problem. The recommendations in this report, accordingly, reflect the judgment of the members of the Commission.

While some of the recommendations may not be applicable to all parts of the continental United States, and some are not applicable to Puerto Rico and the Virgin Islands, it is believed that most of the recommendations can be applied nationwide.

The Commission desires to express special appreciation for the excellent cooperation given by those individuals who served as liaison with departments and agencies of the Federal Government. The contribution made by the departments in providing the Commission with data and with information on current programs was particularly valuable.

Summary

This report is about a problem which many in the United States do not realize exists. The problem is rural poverty. It affects some 14 million Americans. Rural poverty is so widespread, and so acute, as to be a national disgrace, and its consequences have swept into our cities, violently.

The urban riots during 1967 had their roots, in considerable part, in rural poverty. A high proportion of the people crowded into city slums today came there from rural slums. This fact alone makes clear how large a stake the people of this nation have in an attack on rural poverty.

The total number of rural poor would be even larger than 14 million had not so many of them moved to the city. They made the move because they wanted a job and a decent place to live. Some have found them. Many have not. Many merely exchanged life in a rural slum for life in an urban slum, at exorbitant cost to themselves, to the cities, and to rural America as well.

Even so, few migrants have returned to the rural areas they left. They have apparently concluded that bad as conditions are in an urban slum, they are worse in the rural slum they fled from. There is evidence in the pages of this report to support their conclusion.

This Nation has been largely oblivious to these 14 million impoverished people left behind in rural America. Our programs for rural America are woefully out of date.

Some of our rural programs, especially farm and vocational agriculture programs, are relics from an earlier era. They were developed in a period during which the welfare of farm families was equated with the well-being of rural communities and of all rural people. This no longer is so.

They were developed without anticipating the vast changes in technology, and the consequences of this technology to rural pepole. Instead of combating low incomes of rural people, these programs have helped to create wealthy landowners while largely bypassing the rural poor.

Most rural programs still do not take the speed and consequences of technological change into account. We have not yet adjusted to the fact that in the brief period of 15 years, from 1950 to 1965, new machines and new methods increased farm output in the United States by 45 percent—and reduced farm employment by 45 percent. Nor is there adequate awareness that during the next 15 years the need for farm labor will decline by another 45 percent. Changes like these on the farm are paralleled on a broader front throughout rural America, affecting many activities other than farming and touching many more rural people than those on farms.

In contrast to the urban poor, the rural poor, notably the white, are not well organized, and have few spokesmen for bringing the Nation's attention to their problems. The more vocal and better organized urban poor gain most of the benefits of current antipoverty programs.

Until the past few years, the Nation's major social welfare and labor legislation largely bypassed rural Americans, especially farmers and farmworkers. Farm people were excluded from the Social Security Act until the mid-1950's. Farmers, farmworkers, and workers in agriculturally related occupations are still excluded from other major labor legislation, including the unemployment insurance programs, the Labor-Management Relations Act, the Fair Labor Standards Act, and most State workman's compensation acts.

Because we have been oblivious of the rural poor, we have abetted both rural and urban poverty, for the two are closely linked through migration. The hour is late for taking a close look at rural poverty, gaining an understanding of its consequences, and developing programs for doing something about it. The Commission is unanimous in the conviction that effective programs for solving the problems of rural poverty will contribute to the solution of urban poverty as well.

The facts of rural poverty are given in detail later in this report. They are summarized in the paragraphs that follow.

Rural poverty in the United States has no geographic boundaries. It is acute in the South, but

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it is present and serious in the East, the West, and the North. Rural poverty is not limited to Negroes. It permeates all races and ethnic groups. Nor is poverty limited to the farm. Our farm population has declined until it is only a small fraction of our total rural population. Most of the rural poor do not live on farms. They live in the open country, in rural villages, and in small towns. Moreover, contrary to a common misconception, whites outnumber nonwhites among the rural poor by a wide margin. It is true, however, that an extremely high proportion of Negroes in the rural South and Indians on reservations are destitute.

Hunger, even among children, does exist among the rural poor, as a group of physicians discovered recently in a visit to the rural South. They found Negro children not getting enough food to sustain life, and so disease ridden as to be beyond cure. Malnutrition is even more widespread. The evidence appears in bad diets and in diseases which often are a product of bad diets.

Disease and premature death are startlingly high among the rural poor. Infant mortality, for instance, is far higher among the rural poor than among the least privileged group in urban areas. Chronic diseases also are common among both young and old. And medical and dental care is conspicuously absent.

Unemployment and underemployment are major problems in rural America. The rate of unemployment nationally is about 4 percent. The rate in rural areas averages about 18 percent. Among farmworkers, a recent study discovered that underemployment runs as high as 37 percent.

The rural poor have gone, and now go, to poor schools. One result is that more than 3 million rural adults are classified as illiterates. In both educational facilities and opportunities, the rural poor have been shortchanged.

Most of the rural poor live in atrocious houses. One in every 13 houses in rural America is officially classified as unfit to live in.

Many of the rural poor live in chronically depressed poverty-stricken rural communities. Most of the rural South is one vast poverty area. Indian reservations contain heavy concentrations of poverty. But there also are impoverished rural communities in the upper Great Lakes region, in New England, in Appalachia, in the Southwest, and in other sections.

The community in rural poverty areas has all but disappeared as an effective institution. In the past the rural community performed the services needed by farmers and other rural people. Technological progress brought sharp declines in the manpower needs of agriculture, forestry, fisheries, and mining. Other industries have not replaced the jobs lost, and they have supplied too few jobs for the young entries in the labor market. Larger towns and cities have taken over many of the economic and social functions of the villages and small towns.

The changes in rural America have rendered obsolete many of the political boundaries to villages and counties. Thus these units operate on too small a scale to be practicable. Their tax base has eroded as their more able-bodied wage earners left for jobs elsewhere. In consequence the public services in the typical poor rural community are grossly inadequate in number, magnitude, and quality. Local government is no longer able to cope with local needs.

As the communities ran downhill, they offered fewer and fewer opportunities for anyone to earn a living. The inadequately equipped young people left in search of better opportunities elsewhere. Those remaining behind have few resources with which to earn incomes adequate for a decent living and for revitalizing their communities.

For all practical purposes, then, most of the 14 million people in our poverty areas are outside our market economy. So far as they are concerned, the dramatic economic growth of the United States might as well never have happened. It has brought them few rewards. They are on the outside looking in, and they need help.

Congress and State legislatures from time to time have enacted many laws and appropriated large sums of money to aid the poverty stricken and to help rural America. Very little of the legislation or the money has helped the rural poor. Major farm legislation directed at commercial farms has been successful in helping farmers adjust supply to demand, but it has not helped farmers whose production is very small. And because the major social welfare and labor legislation has descriminated against rural people, many of the rural poor—farmers and farmworkers particularly—have been denied unemployment insurance, denied the right of collective bargaining, and denied the protection of workman's compensation laws.

This Commission questions the wisdom of massive public efforts to improve the lot of the poor

in our central cities without comparable efforts to meet the needs of the poor in rural America. Unfortunately, as public programs improve the lot of the urban poor, without making similar improvements in conditions for the rural poor, they provide fresh incentive for the rural poor to migrate to the central cities. The only solution is a coordinated attack on both urban and rural poverty.

The Commission has endeavored to chart a course to wipe out rural poverty. Emphasis has been placed on the problems of poor rural people, and problems of impoverished rural communities. Changes in existing programs and the development of new programs are considered. Action on the immediate needs of the rural poor is emphasized, as well as action to change the conditions which make them poor. Human development and the physical resources needed for this development are stressed. Improving the operation of the private economy in order to provide rural people with better opportunities for jobs and a decent living is emphasized.

It is the firm conviction of the Commission that the complexity of the problems of rural poverty preclude the success of a single program or approach. Programs addressed to immediate needs will not erase the underlying conditions creating and perpetuating rural poverty. Programs addressed to these conditions will not immediately help the poor. The Commission's recommendations complement and reinforce one another. In total, the recommendations will go far to solve the problems of rural poverty.

The Commission is convinced that the abolition of rural poverty in the United States, perhaps for the first time in any nation, is completely feasible. The nation has the economic resources and the technical means for doing this. What it has lacked, thus far, has been the will. The Commission rejects the view that poverty, in so rich a nation, is inevitable for any large group of its citizens.

Elsewhere in this report there appear the recommendations of the Commission in detail. These recommendations call for action by all branches of government—local, State, and Federal—as well as by private individuals and groups. The major thrust of the recommendations is discussed briefly in the paragraphs that follow.

(1) The Commission recommends that the United States adopt and put into effect immediately a national policy designed to give the residents of rural America equality of opportunity with all other citizens. This must include equal access to jobs, medical care, housing, education, welfare, and all other public services, without regard to race, religion, or place of residence.

(2) The Commission recommends, as a matter of urgency, that the national policy of full employment, inaugurated in 1946, be made effective. The need is even greater in rural areas than in urban areas. The Commission urges that this need be given priority in legislation and appropriations. To the extent that private enterprise does not provide sufficient employment for all those willing and able to work, the Commission believes it is the obligation of government to provide it.

(3) The Commission believes that the United States has the resources and the technical means to assure every person in the United States adequate food, shelter, clothing, medical care, and education and, accordingly, recommends action toward this end. Millions of rural residents today are denied the opportunity of earning a living. The Commission believes it is the obligation of society and of government, to assure such people enough income to provide a decent living. In order to achieve this, basic changes are recommended in public assistance programs.

In some rural areas of the United States there is not only malnutrition but hunger. Existing public programs for food distribution to those in need have failed to meet the need. The Commission recommends that the food stamp program be expanded nationwide and that eligibility be based upon per capita income. Food stamps should be given to the poorest of the poor without cost.

(4) The Commission recommends a thorough overhauling of our manpower policies and programs, particularly including public employment services, in order to deal effectively with rural unemployment and underemployment. The Commission deplores the fact that the richest, most powerful nation in history compels millions of its citizens to engage in aimless wandering in search of jobs and places to live. The recommendations of the Commission aim at a comprehensive and active manpower program which can be an effective weapon against poverty.

(5) The Commission recommends extensive changes in our rural education system, ranging from preschool programs to adult education. Rural schools must be brought up to par with urban schools. The educational system must reclaim

youth and adults who drop out before obtaining sufficient education to cope with the complexities of today's world. An educational extension service is recommended to help teachers and schools meet the needs of all students.

(6) The Commission is deeply concerned at the evidence of disease and the lack of medical care in rural areas. The Commission, therefore, recommends rapid expansion of health manpower—both professional and subprofessional—in rural areas, and the establishment of Community Health Centers which can focus on the health needs of rural people.

(7) The Commission recommends development and expansion of family planning programs for the rural poor. Low income families are burdened with relatively numerous children to feed, clothe, and house. They are prepared psychologically to accept family planning. As a matter of principle, they are entitled to facilities and services to help them plan the number and spacing of their children.

(8) The Commission recommends immediate action to provide housing in rural areas by public agencies and puts special emphasis on a program providing rent supplements for the rural poor. The Commission further recommends that a single unified housing agency be made responsible for housing programs in rural areas and that credit terms be made more responsive to need. The Commission also urges a substantial increase in appropriations for Indian housing.

(9) The Commission believes that the overlapping patchwork of districts, organizations, plans, and programs for development impedes the economic development of lagging and poverty-stricken areas and regions. It, therefore, recommends the creation of multicounty districts, cutting across urban-rural boundaries, to cooperatively plan and coordinate programs for economic development. To finance development, the Commission recommends Federal grants, loans, and industrial development subsidies, as well as State and local tax reform.

(10) The Commission believes that without citizen responsibility, which includes the active involvement and participation of all, antipoverty and economic development programs will flounder. Therefore, the Commission recommends that increased attention be given to involving the poor in the affairs of the community, on both local and areawide levels. Specific suggestions are made for improving the effectiveness of the antipoverty programs of the Office of Economic Opportunity and the Department of Agriculture.

(11) The Commission recommends that the Federal Government re-examine its commercial farm programs in order to make sure that adjustments in the supply of farm products are not made at the expense of the rural poor. Public programs are recommended to enlarge small farm operations and to retire submarginal land from commercial production, but with safeguards protecting the interest of low income families living on submarginal land. The Commission also recommends that the development of additional farmland with public funds cease until the nation's food and fiber needs require this development.

(12) Without effective government at all levels, the recommendations in this report will not result in the eradication of rural poverty. The Commission recommends changes in program development and administration to facilitate and encourage the effective involvement of local, State, and Federal governments.

Statement of Beliefs

The National Advisory Commission on Rural Poverty has made its recommendations on the basis of specific beliefs to which all members of the Commission subscribe. These beliefs are as follows:

1. The United States today has the economic and technical means to guarantee adequate food, clothing, shelter, health services, and education to every citizen of the Nation.

2. Involuntary tragedy is a tragedy under any circumstances and poverty in the midst of plenty is both a tragedy and a social evil.

3. The rural poor are not a faceless mass. They are individual human beings. All programs designed to eliminate poverty must therefore give paramount consideration to the rights and the dignity of the individual.

4. Every citizen of the United States must have equal access to opportunities for economic and social advancement without discrimination because of race, religion, national origin, or place of residence.

5. Because rural Americans have been denied a fair share of America's opportunities and benefits they have migrated by the millions to the cities in search of jobs and places to live. This migration is continuing. It is therefore impossible to obliterate urban poverty without removing its rural causes. Accordingly, both reason and justice compel the allotment of a more equitable share of our national resources to improving the conditions of rural life.

6. All levels of government—local, State, and Federal—must accept responsibility for public measures to eliminate poverty and must be aware of the effect that any of their activities have on the poor.

7. Inasmuch as the consent of the governed is a basic tenet of American government, the rural poor must be given a voice in the planning and administration of public programs designed to eliminate poverty.

8. We can no longer evade the fact that far too high a proportion of our rural population is unemployed and that the national policy of full employment is not effective. We believe it to be an obligation of private enterprise and of government working together to provide employment at adequate wages for all persons able and willing to work.

9. The cost to the Nation of rural poverty is much too high to permit its continuance. We believe the time for action against rural poverty has arrived.

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PART I

Chapter 1

The Fourteen Million

It is a shocking fact that in the United States today, in what is the richest nation in history, close to 14 million rural Americans are poor, and a high proportion of them are destitute. By their poverty they are deprived of freedom to share in our economic abundance.

We can no longer permit public policy to ignore the rural poor. For if we do, we shall see a continuing movement of rural people to our central cities. As the summer of 1967 illustrated, the slums and ghettos of the city breed hatred and violence, which is no solution to the problems of either city or country.

It is to the problems of the rural poor that this report is addressed. Who are the rural poor? Where are they? How poor are they? What can be done to wipe out their poverty?

It may surprise most Americans to know that there is more poverty in rural America, proportionately, than in our cities. In metropolitan areas, one person in eight is poor, and in the suburbs the ratio is one in 15. But in rural areas one of every four persons is poor (table 1).

Some 30 percent of our total population live in rural areas, but 40 percent of the nation's poor live there. Within this total there are nearly 3 million families, plus a million unattached persons.

Contrary to popular impression, all the rural poor do not live on farms, nor are all of them Negroes. Most live in small towns and villages. Only one in four of these rural families lives on a farm. And, of the 14 million rural poor, 11 million are white.

It is true that a higher proportion of Negroes than of whites are poor—three out of five rural nonwhite families are poor. They are heavily concentrated in some areas. In fact, 90 percent of them are clustered in the poorest counties in America. Low income white people are more widely scattered as well as more numerous.

Where are the Rural Poor?

It has become popular to talk of "pockets of poverty." The truth is there are no such things as pockets of poverty. Poverty refuses to stay in pockets. But there are areas of heavy concentration of rural poor. And there is a continuing exodus to towns and cities.

TABLE 1.—*Persons in poverty, by rural and urban residence, March 1965*

Item	Persons at all income levels		Poor persons [1]		
	Number (millions)	Percent distribution	Number (millions)	Percent distribution	Percent poor
United States	189.9	100.0	33.7	100.0	17.7
Total rural	55.3	29.1	13.8	40.9	25.0
Farm	13.3	7.0	3.9	11.6	29.3
Nonfarm	42.0	22.1	9.9	29.4	23.6
Total urban	134.6	70.9	19.9	59.1	14.8
Small cities	27.1	14.3	6.4	19.0	23.6
Metropolitan areas	107.5	56.6	13.5	40.1	12.6
Central cities	58.6	30.8	10.2	30.3	17.4
Suburbs	48.9	25.8	3.3	9.8	6.7

[1] Income data relate to 1964. Poverty statistics presented here are preliminary estimates, based on the Social Security Administration poverty lines for urban and rural nonfarm, but using 85 percent rather than 70 percent as the farm-to-nonfarm ratio. The methods used in deriving this ratio and the above data are discussed in a technical report, to be published. Percentages may not add to 100 because of rounding.

Poor people live everywhere, including cities, but some areas and regions have such heavy concentrations of rural poverty that they stand out. Much of the South, as shown in figure 1, has a heavy concentration of rural poverty. Outside of the South, Indian reservations, noticeably in the Southwest and the upper Great Plains, contain distinct concentrations of the rural poor, along with New England and the upper Great Lakes.

Within the South several areas of rural poverty can be distinguished. Appalachia perhaps has become best known in recent years, but there is also the Coastal Plain to the east, the Ozarks to the

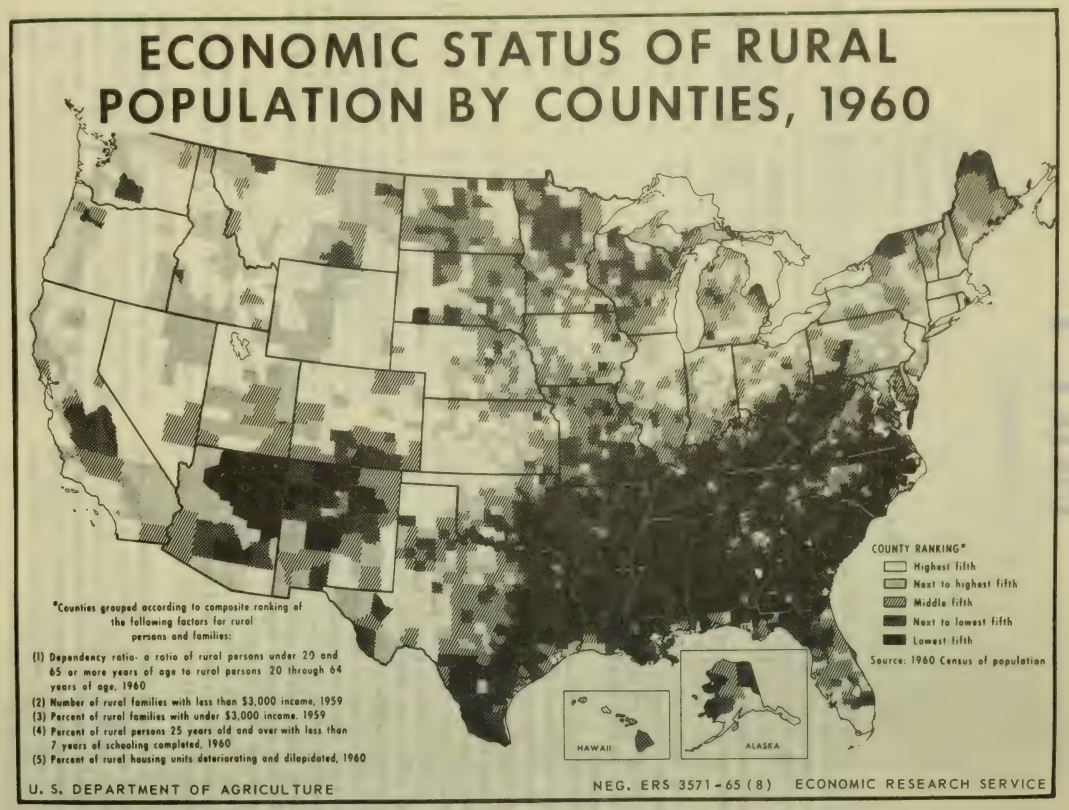

FIGURE 1

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west, the Black Belt of the Old South, and the Mexican-American concentrations along our southern border. Even within a State, distinct areas with high concentrations of poverty may be identified, as in the Delta and the hill country of Mississippi.

Symptoms of Poverty

Average family incomes are low in poverty areas, but there are many additional symptoms of poverty, as indicated by the factors used to reflect economic status in figure 1. A low level of formal schooling among adults parallels low income levels. Rural housing is dilapidated and in need of extensive repair or replacement. Relatively high proportions of children, youths, and the aged depend on those of working age. And the working-age population is less likely to be in the labor market, with the result that the burden of workers in supporting nonworkers is heavier than in more prosperous sections of America.

When a family's income is less than $3,000, that family is usually defined as poor.[1] In the poverty areas of rural America, however, an income of $3,000 per family is the exception, not the rule. Of the poor families in these areas, more than 70 percent struggle along on less than $2,000 a year, and one family in every four exists, somehow, on less than $1,000 a year.[2]

Schooling in low income areas is as inadequate as incomes. Rural people generally have poorer schooling than city people, and rural poor people are severely handicapped by lack of education. Few rural poor adults attain the general rural average of 8.8 years of school completed. Male farm laborers between 55 and 64 years of age and earning incomes of less than $1,000 average only 5 years of schooling.

Moreover, low educational levels seem to be self-perpetuating. If the head of a rural poor family has had little schooling, his sons are often handicapped in their efforts to get an education.[3]

It is especially difficult for rural people handicapped educationally to acquire new skills, or get new jobs, or otherwise adjust to a society increasingly urbanized. This is as true on the farm as in urban industry, for modern farming requires skills that the poorly educated lack. The less the schooling, the poorer the job and the lower the income.

Lacking in education, the rural poor either concentrate in low-paying jobs on the farm or elsewhere in rural areas, or swell the ranks of the unemployed and the underemployed.

Negroes, Indians, and Mexican Americans suffer even more than low income whites from unemployment and underemployment. Their schooling, as a rule, is even less than that of whites in the rural poverty areas. Negroes emerging from the sharecropper system often migrate to urban ghettos. Those who remain in rural areas are frequently unemployed, and when they do have jobs, they are found mostly in wage work; few become farm operators. Indians on reservations live in poverty, in the main, with few opportunities for work at well-paying jobs. Off the reservations Indians rarely find it possible to get a better paying job, if they find one at all.

At best, job opportunities in rural areas are scarce, and in many places they are getting scarcer year by year. For rural people living within commuting distance of nonfarm jobs, it is sometimes possible to combine farming with a variety of jobs off the farm, but in isolated areas the need for such opportunities is far greater than the supply. At that, even with every adult member of the family working, many families in rural poverty areas don't make enough for decent living.

In fact, some rural families make so little that their children are not only malnourished but literally starving, as a team of six physicians discovered on a 1967 survey in the rural South. The physicians summed up their findings in these words:

> In sum, we saw children who are hungry and who are sick—children for whom hunger is a daily fact of life and sickness, in many forms, an inevitability. We do not want to quibble over words, but "malnutrition" is not quite what we found; the boys and girls we saw were hungry—weak, in pain, sick; their lives are being shortened; they are, in fact, visibly and predictably losing their health, their energy, their spirits. They are suffering from hunger and disease and directly or indirectly they are dying from them—which is exactly what "starvation" means.
>
> . . . It is unbelievable to us that a nation as rich as ours, with all its technological and scientific resources, has to permit thousands and thousands of children to go hungry, go sick, and die grim and premature death.[4]

[1] The measurement of poverty is discussed later in this chapter.

[2] Unpublished census data from 1966 Composite Survey of Economic Opportunity.

[3] CURRENT POPULATION REPORTS, Series P–20, No. 132.

[4] HUNGRY CHILDREN. A Special Report. SOUTHERN REGIONAL COUNCIL. Atlanta, Ga.

Population Growth and Migration

Rural low income areas have lost population for a number of years, mainly through the exodus of rural farm people. From 1790 to the present, the nation's population has grown from about 4 million to nearly 200 million persons. In the process, it has switched from about 95 percent to 30 percent rural. As late as 1910 a third of the entire population was on farms, but this figure has dropped to only 6 percent. The more than 6,000 cities contained 125 million persons in 1960, or 70 percent of the total population.

The strictly rural areas, and areas with the lowest incomes, have the heaviest out-migration. Consider, for example, the counties classed as all rural—lacking a city (or place) of 2,500 or more population. By 1960, aside from the natural increase (births minus deaths) these counties had lost almost 2 million people, or 15 percent of their 1950 populations through migration. In contrast, the mainly urban counties (with 70 percent or more of their population in urban centers) gained more than 5 million, or about 6 percent through migration.

The poorest counties, with median family incomes of less than $2,000 in 1959, lost more than 600,000 persons—over a fourth of their 1950 population—through migration. In the Deep South, for example, a mass migration of Negroes, mainly to northern industrial centers, has helped reduce southern rural poverty at the expense of cities. At the same time, high income counties, with median family incomes of $7,500 or more in 1959, increased through migration by about 200,000 people.

Americans are well-known for their geographic and social mobility, and the freedom to be mobile is perhaps one of our most cherished values. Many seek to escape rural poverty by moving from the farm or small town to larger cities and into nonfarm work. But the fact remains that if one's origin is in agriculture, his chances of remaining there are relatively great. Given the low income levels of many farmers and farmworkers, the tendency to inherit one's occupation serves as an obstacle to an escape from poverty. Studies demonstrate that persons entering the labor market at the lowest income levels have the greatest difficulty in rising to better jobs and higher incomes. Many simply do not make the transition. Migration to a city is therefore no guarantee of escaping poverty, as the presence of millions of poverty-ridden ex-ruralites now in cities testifies.

More Children Than Income

The size of many low income families make escape from poverty extremely difficult. The world over, large families have been traditiona in rural areas, and the tradition lives on i rural America, especially in poverty areas. Th result, of course, is that meager resources have t be stretched beyond the breaking point to feed house, clothe, and educate the children.

The birth rate has been declining in the natio as a whole since 1957, but average number of birth is still high in rural poverty areas. The 1960 statis tics revealed that throughout the nation wome 40 to 44 years of age had produced an average— statistically speaking—of 2.5 children each. I farm families with incomes of less than $2,000, th average was 3.7 for white mothers and 6.4 fo nonwhites.

Persistence in rural America of the traditio favoring large families is understandable. Th rural way of life, at one time, dictated the nee for large families. Before machines and moder technology came along, the family farm neede children as potential workers. Religious belie buttressed the tradition. And society more or le expected and sanctioned large families.

To add to the burden, the households of lo income people in rural areas often include sever generations. This is partly from necessity, part cultural inheritance. Rural people cling ten ciously to the custom of caring for the old foll at home. And when the children of friends ar neighbors need a place to stay, they are taken i

Then, when the youths and young adults of the households go to the city in search of jobs, tho who are left have more dependents to suppo The combination of few workers, low incomes, ar more people to support creates a dependency pro lem that is acute.

The Residual Population

The mass exodus from low income rural areas recent years has meant that those left behind a often worse off than before. Their chances of esca ing from poverty, or avoiding deeper poverty, even easing their burden have been reduced. Part this is because the areas have too many old peop and children for the working-age population support. Partly it is because a smaller populatio

spread too sparsely, cannot support or build a strong, flexible social and economic superstructure in the area. Local governments, schools, and churches are dying from lack of support. And as local facilities and services continue to decline, the chances for redevelopment diminish.

Figures on the age of heads of households in rural poverty areas underline the hopelessness of the situation. In 1965, among low income families in these areas, one of every four heads of household was 65 years of age, or older. Contrast this with rural areas with adequate incomes. There, only about 7 percent of the heads of households were as old as 65. Nor is the picture brighter for heads of households who were younger but living in poverty areas. Of the age group 22 to 54, half were poor.

Measuring Poverty

The Concept and the Reality

"Poverty" is a controversial word. Not everyone agrees on what it means. This applies to experts as well as to laymen. In the opinion of the Commission, poverty is partly inadequate income, but it goes much deeper than that. Poverty afflicts the mind and the spirit as well.

Income is important in escaping from poverty, though not the whole answer. Education and jobs are also essential, and they can lead to higher income. Income is obviously needed to buy the food, clothing, housing, schooling, and health services required by anyone in this money economy if he is to escape from poverty—if he is to preserve some self-esteem.

But poverty is much more:

- It is lack of access to respected positions in society, and lack of power to do anything about it.
- It is insecurity and unstable homes.
- It is a wretched existence that tends to perpetuate itself from one generation to the next.

Low income is widely used as an index of poverty; the number of low income people is taken as the number of poor, though this may be an oversimplification. The poverty line is the minimum level of income needed to provide the kind of living that our society considers a basic human right.

Opinions as to where the poverty line really is, or should be, have changed as America has become more prosperous and more highly urbanized. Our standard of what is an adequate income for the poor will probably rise. Just as the poverty budgets of the 1920's by today's standards appear grossly inadequate, Americans in the year 1980 may have the same opinion of today's poverty lines.

If Billions Alone Were the Remedy

What would it cost to bring all the poor of the United States above the poverty line, if we merely transferred money to them?[5]

In 1964, for the nation as a whole, it would have cost about $12.5 billion to lift the incomes of the poor above the poverty level. The sum of $12.5 billion is about 2.6 percent of all personal incomes in the United States. It would transfer roughly $1,000 to each of the "poor" households. To close the income gap for white households considered poor, the total needed would be about $9 billion; for nonwhite households, the total needed would be $3.5 billion.

These estimates include both urban and rural poor. To close the income gap for the rural poor alone would require nearly $5 billion.[6]

This does not mean that rural poverty would be eliminated simply by adding $5 billion to the incomes of the rural poor. Poverty cannot be ended that way. Even if the incomes of the rural poor were automatically increased by perpetual transfers of income through relief checks and other welfare payments, many of the poor would remain dependent, lacking in self-esteem, never able to make their own way or to win the respect of their neighbors.

How Income Needs of the Poor Vary

But how much income must a family have to get out of poverty? The answer obviously depends on size of family, the prices they have to pay and, in addition, the changing standards of living which our society regards as essential.

The figure of $3,000 as the poverty line is useful as a rough approximation, though it cannot be applied universally or indiscriminately. For some households an income of $3,000 is more than is needed for a decent level of living. For other households $3,000 is not nearly enough.[7]

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[5] The data presented here are preliminary estimates based on: MOLLIE ORSHANSKY. RECOUNTING THE POOR—A FIVE YEAR REVIEW. Social Security Bul. April 1966, table 5.

[6] This is a rough approximation, predicated on the fact that about 40 percent of the poor are rural.

[7] HELEN H. LAMALE. POVERTY: THE WORD AND THE REALITY. Monthly Labor Review, July 1965, pp. 822–827.

While it is possible to use the $3,000 income level as a rough indicator of poverty, more refined measurements are available. Poverty income levels that vary by family size and type, and by farm and nonfarm residence, have been developed by Orshansky in the Social Security Administration of the Department of Health, Education, and Welfare.[8] These levels are so designed that they center around the $3,000 family income level. A rural nonfarm family of four, for example, would need at least $3,200 to be above poverty. A rural nonfarm family of seven would need $5,205.

The comparable income levels for farm families were set at 70 percent of the nonfarm levels—$2,240 for a farm family of four, for example. This means that a farm family needs only 70 percent as much income as a rural nonfarm or urban family to be above poverty. We doubt that this is lating census data, in determining overall trends and characteristics of the nation's poor. For this purpose they have served fairly well, aside from accurate. The procedures and assumptions used in deriving this 70-percent adjustment factor are questionable and should be re-examined.

The Social Security Administration developed its set of poverty income levels to be used in tabu- the shortcomings discussed above. They are a big improvement over the straight $3,000, which completely ignored variations in family needs.

However, their apparent precision has invited misuse. Many Federal, State, and local government agencies have adopted these new poverty income levels, and are using them as eligibility criteria for welfare and antipoverty programs. The experts who developed the poverty levels are appalled at their being used in this way. They were not intended for this purpose and they are not adequate.

Further analysis is needed to determine the exact income needed to raise a household above the poverty level. Regional variations in the cost of living remain to be taken into account. The fact that rural people often must travel great distances to buy necessities, or to obtain medical service, has yet to be allowed for. We still need indices of poverty that will be both accurate and fair. The Federal Government should take the initiative in developing a standard set of poverty lines. As a start, this Commission has conducted a study to determine the income needed to support a comparable level of living for farm, rural nonfarm, and urban families. Preliminary results indicate that farm families need about 85 percent, rather than 70 percent, as much income as a comparable family in urban areas. Using this ratio, the Commission estimated that the number of rural poor have been undercounted by 700,000 persons, or more than 20 percent.[9]

In interpreting and using poverty income levels, it is necessary to recognize that people whose incomes are a few dollars above the poverty level may nevertheless be in genuine distress and living at a level below an acceptable one. We have to keep in mind that training and educational programs designed to help the poor can help the near-poor, and should be so used.

The urgent goal, of course, must be to help those in greatest need. But an income level of $3,000 ought not to be thought of as an upper limit for today's poor. Rather, is should be considered a threshold over which low income families may pass to higher levels. This Commission firmly believes that antipoverty programs should not only lift people to the poverty line, but help them to rise as much further as their abilities will permit.

A Culture of Poverty

There is such a thing as a culture of poverty. No one knows how many of the rural poor have fallen into it, but it is common enough to deserve attention. One witness who testified at a hearing before this Commission, the Rev. A. J. McKnight, of Louisiana, described rural poverty this way:

> Many of these undeveloped people have developed a culture of poverty. . . . The poor think differently; they have a different sense of values. . . . Take the concept of education: To the middle class it stands for the road to better things for one's children and one's self. To the poor it is an obstacle course to be surmounted until the children can go to work. . . .
>
> The poor tend to be fatalistic and pessimistic because for them there is no future; everything is today. They do not postpone satisfactions. When pleasure is available, they tend to take it immediately. They do not save, because for them there is no tomorrow.
>
> The smug theorist of the middle class would probably deplore this as showing a lack of traditional American virtues. Actually it is the logical and natural reaction of a people living without hope, without a future.

[8] Mollie Orshansky. The poor in 1965 and trends, 1959–65, U.S. Dept. Health, Education, and Welfare, Research and Statistics, Note. Feb. 16, 1967.

[9] Table 1 is based on the Commission's estimates. Details are given in a technical report to be published.

We do not know how many people in rural America have lost all hope in a future. It is tragic and shameful that any have.

This Commission believes that by adopting the program of action recommended in this report, we can restore hope to many who are now without it, and we can help the 14 million rural poor climb out of poverty. The nation can do this, that is, if there is the will to do it.

The time for action is now.

Chapter 2

Six Reasons For Action Now

That 14 million rural Americans have been left behind, consigned to poverty and destitution, should be reason enough for action. Still, there are those who will say, "Any American who is poor has only himself to blame." The findings of this Commission are impressive proof to the contrary. On the basis of these findings, the Commission offers the following six reasons which justify prompt and effective action against rural poverty.

First, simple justice demands that we take action now. It is imperative that the United States provide rural poor people with the same opportunities to share in the fruits of our social and economic progress that all other citizens enjoy. Today's rural poor have been left behind in the wake of basic changes in the fabric of rural life. Many are refugees from an agricultural revolution. Others are refugees from similar revolutions in mining and other natural-resource-based industries. Cut off from opportunities to develop and prosper in rural areas, they are ill-equipped to help themselves. They, and the communities in which they live, are doomed to permanent and increasingly severe poverty unless they get help. Justice demands that they not be isolated from the rest of society.

Moreover, rural people have suffered severely because of discrimination. The incidence of poverty is especially heavy among Negroes, Mexican Americans, and Indian Americans living in rural areas. A much higher percentage of these minorities than of the rural white is poor. Unless the barriers of economic, social, and racial discrimination are removed, many of them will never have a chance to work their way out of poverty.

Second, we must act now because the rural poor, in their desire for the same goods and services enjoyed by most urban people, continue to pile up in the central cities of America. Yet, for many migrants who lack the training and skills for employment in the cities, the move is like jumping from the frying pan into the fire. The result is frustration, despondency, and despair.

The blight in our central cities, as well as the continued blight in rural America, is a national disgrace. The problems of rural America and central city America are closely linked through migration. A high proportion of the residents of our cities formerly lived in rural areas. Many more are one or two generations removed from a rural parentage.

The senseless piling up of refugees from rural America in our central cities provides no solution to the problems of rural areas or of the cities.

Third, we must act because our antipoverty programs have bypassed the rural poor. Rural poverty is not as apparent as urban poverty. The rural poor, especially the white rural poor, are not well organized, and have few spokesmen for bringing the nation's attention to their problems. The urban poor are more concentrated, organized, and vocal in their call for help, and they receive more help than the rural poor. Rural poor people have been shortchanged in public programs designed to improve transportation, housing, education, health services, area development, and income maintenance.

Even though living conditions in central city America are intolerable, the continuing stream of rural migrants to our central cities strongly suggests that conditions there are better than in our blighted rural areas.

This Commission questions the wisdom of massive public efforts to improve the lot of the poor in our central cities without comparable efforts to meet the needs of the poor in rural America. There is danger that programs limited to the needs of our central cities will be self-defeating. If economic and social conditions are greatly improved in our central cities without comparable improvement in rural areas, additional incentives will be created for migration to the cities. In the end, therefore, the special housing, education, employment, and other special programs for the central cities may lead to increased migration, thereby complicating the very problems we are trying to solve.

Even more important is the fact that there is a growing restlessness in rural America. Many people whose families have been deprived for generations are deeply resentful that little is being done to meet their needs. National action which in effect rewards the violence in the central cities is not unnoticed in rural America. Through such action, the nation is telling rural poor people that if they want effective programs, they must find more violent ways of making their demands known. This is a tragic message and it could have tragic consequences. The problems of poverty in both rural and urban America are so serious and so interrelated that we cannot ignore one group while helping the other.

Fourth, we must act now because our rural communities do not share the benefits of much of our nation's economic growth and technical change, and conditions in these communities are destined to become much worse unless basic changes are made.

The early rural community was largely self-sufficient. It performed the services needed by farmers and other rural people. But now most of these services are performed in small to medium-sized cities to which rural areas are linked by an increasing number of channels. Today the area of an effective community is approximately 100 times that of the effective community of the early 1900's.[1]

Many small communities have been unable to adjust and keep pace with the changing economic and social fabric of the more prosperous ones. Accordingly, many rural communities formerly providing service functions for rural families now and their economic base eroded away. They, and the people within them, are trapped in poverty.

Numerous rural centers have lost so much population they have become ghost towns and resemble abandoned gold-mining villages. Their economic and social facilities are not meeting the needs of the people in the communities they serve. Nor can they without help. Poverty in these communities promises to be self-perpetuating unless there are effective programs to reach and assist the people who live there.

[1] KARL A. FOX. CHANGE AND INTEREST ADJUSTMENTS: A METAMORPHOSIS OF RURAL AMERICA. (Paper prepared for the Conference on Implications of Structural and Market Changes on Farm Management and Marketing Research.) Dept. Econ., Iowa State Univ., April 1967.

The changes in the social and economic fabric of rural America are irreversible. Indeed, it is unthinkable that we should try to reverse them. The capacity of this nation to eradicate poverty stems from its rapid technological progress and its greatly expanded capacity to produce. But the same changes giving us greatly increased production and improved levels of living have created very difficult adjustment problems for many rural families and rural communities. And they will continue to do so. Fewer people will be employed in agriculture, forestry, fisheries, and mining in the future than today.

The job to be done is to restructure rural facilities and services on a broader geographical base and to connect them with their urban counterparts. There will be little or no abatement of rural poverty until this is done. We have to change our traditional view of rural America—its function, its relation with the rest of the nation, and the social and economic processes required to assure a better life for rural people.

Fifth, we must act because our rural communities are unable to prepare people to participate in the modern economy, and they will become increasingly less able to do so unless there are concerted and extensive changes.

There is in rural America today a serious and widespread failure to prepare the people for participation in a modern and advancing economy. In entirely too many instances the schools, libraries, health facilities, churches, and governments in rural America have failed to develop programs to meet the needs of the people. The extensive unemployment and underemployment in rural areas attest to the fact that our record is not good in preparing people for jobs and in helping them to locate productive employment.

State and local governments are not able to meet the needs of the people in most rural communities. At the same time that the citizens of rural communities have begun to demand the kind of services that cities offer, local governments are finding it harder and harder to provide even the basic services.

The winds of change have struck rural government, though local leaders often seem unaware of it. Recent changes in rural America have rendered obsolete many political boundaries of villages and counties. Too many local governments in rural areas operate on too small a scale to be practicable.

They are able to provide no more than the most elementary public needs. Their tax base is eroding as their more able-bodied wage earners leave for jobs elsewhere.

In a very practical sense, rural government has been left behind politically as well as economically. Though these governments continue to operate as they have for 100 years, the center of political power has shifted drastically. It has moved toward the more professional governments of urban areas and toward State and national governing bodies. The important decisions on education, health, welfare, and other matters of vital public concern are made, more and more often, at higher levels. Because local rural government has failed to change, it has isolated itself and its constituents from the political mainstream.

The problems of overcoming rural poverty are complicated by the fact that many rural poor have lost almost all hope of improving their situation. Many have attempted to keep up with the technological tide in farming and have failed. Many have been disillusioned in their efforts to obtain employment outside agriculture, forestry, fisheries, or mining. Their lack of the requisite skills to earn a decent living is discovered too late. It will not be easy to motivate these people to try again. But we must.

Part of our problem stems from our unwillingness to face realistically the limited employment potential of today's modern farming, and tomorrow's farming. Likewise, we have failed to comprehend the limited job opportunities in forestry, fisheries, and mining. We have not developed good employment opportunities for the people in rural areas. Worse yet, we lack the kind and quality of educational and manpower training services to provide rural people with skills necessary for other employment. Without forthright action, jobs will get scarcer in rural areas, and the skill gap between urban and rural people will widen.

Sixth, we must act now because our public programs in rural America are woefully out of date. Many of them, especially your farm programs and vocational agriculture programs, are relics from an earlier era. They were developed during a period when there was a strong belief that people born in rural America should stay there and work on farms, or in farm-related occupations. The programs emerged from legislation which equated the welfare of farm families with conditions on farms and the welfare of rural communities with the incomes of farmers. These conditions no longer prevail.

Although many farm programs were originally developed with the express purpose of increasing the incomes of low income rural families, they did not take into account the vast changes in technology of the last 30 years. As a result instead of combating low incomes among rural people, these programs have helped to increase the wealth of landowners while largely bypassing the rural poor.

It cannot be emphasized too strongly that the poverty in rural areas is self-perpetuating. There will be little or no abatement and no real solution unless specific steps are taken to cope with it. Moreover, since the basic structure of rural America has been altered, the old programs are not sufficient for coping with problems of today. A new approach clearly is required.

The Commission has endeavored to chart a course to wipe out rural poverty. Emphasis is placed upon the many problems of the rural poor people. The problems of the people differ because of differences among them in age, race, education, geographic location and other attributes. The diversity of their needs is recognized, and recommendations are made to meet the diverse needs.

In developing these recommendations, the Commission gave consideration to problems of the rural poor and to problems of impoverished rural communities. Changes in existing programs and the development of new programs are proposed. The immediate needs of the rural poor are emphasized, but the necessity for changing the conditions that have made them poor is also stressed. Better programs for human resource development and the physical resources needed for their development are urged. Emphasis is placed upon improving the operation of the private economy so as to provide rural people with better opportunities for jobs and a decent living. Government is called upon to complement the private sector where necessary to erase rural poverty.

In the Commission's view, the complexity of the problems of rural poverty preclude the success of a single program or approach. Programs emphasizing immediate needs will not change the conditions creating and perpetuating rural poverty

and programs designed to change these deeply rooted conditions will take time. The recommendations complement and reinforce one another. Taken together, the recommendations will eliminate rural poverty, and thereby remove the basis for much of our urban poverty.

The costs to society for implementation of the Commission's recommendations will be high, but the costs will be immeasurably higher if we do not implement them. Over the long pull, the gains to society from wiping out poverty will far exceed the costs. The time for action is indeed now.

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THE CASH METHOD AS APPLIED IN AGRICULTURE —A REEXAMINATION

*Harvie Branscomb, Jr.**

Since the early days of the income tax, agricultural taxpayers using the cash method of accounting have been permitted to deduct costs of growing crops and livestock in the year in which the costs were paid, even though the sale of the crops or livestock was reportable in a subsequent year, and in some cases at capital gains rates.[1]

During deliberations on the Tax Reform Act of 1969, the Administration,[2] the House Ways and Means Committee,[3] and the Senate Finance Committee[4] all concluded that this method of accounting resulted in some instances in distortions of income and was susceptible to abuse. The Treasury has not to this point advanced, nor has the Congress seriously considered, any proposal that agricultural taxpayers be required to switch to the accrual system or to a modified cash system in which growing costs must be capitalized,[5] but accrual accounting has been described as the only "proper" method for use in agriculture.[6]

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[1] T.D. 2153, 17 TREAS. DEC. INT. REV. 101 (1915); Treas. Reg. 33, § 4 (1917); Treas. Reg. 45 § 110 (1918); Treas. Reg. § 1.162-12 (1958), Treas. Reg. § 1.471-6 (1958). The amendment in 1951 of section 117(j) the Internal Revenue Code of 1939 to confirm its applicability to breeding livestock did not modify the deductibility of agricultural costs under the cash method, but increased the benefit of such deductions to livestock breeders.

[2] Statement of the President to the Congress, April 21, 1969; TREASURY DEP'T TECHNICAL EXPLANATION OF TAX REFORM PROPOSALS 39-47 (Comm. Print 1969); TREASURY DEP'T, TAX REFORM STUDIES AND PROPOSALS 152-63; (Joint Comm. Print 1969); *cf.* THE PRESIDENT'S 1963 TAX MESSAGE 144-45 (Comm. Print 1963).

[3] H.R. REP. NO. 91-413, 91st Cong., 1st Sess. 62-71 (1969).

[4] S. REP. NO. 91-552, 91st Cong., 1st Sess. 95-99 (1969).

[5] No provisions of the Tax Reform Act of 1969 (hereinafter cited as Tax Reform Act) dealt directly with the cash receipts and disbursements method as applied to farmers and ranchers, but several were designed to limit its advantages. Section 211 of the Act increased the holding period for capital gains on breeding cattle and horses, and eliminated the prior exception of livestock from the recapture provisions of section 1245 of the Code. Section 213 was intended to improve the rules for disallowing losses where an activity is motivated by tax avoidance or other non-profit objectives, and section 214 provided for a limited recapture of deductions for soil and water conservation and land clearing costs when farm land is sold.

[6] "Under present law, income or losses from farming may be computed under more liberal accounting rules than those generally applicable in the case of other types of business activities. . . . As indicated above, a taxpayer who elects to follow *proper* accounting rules [i.e., accrual rules] is not to be subject to the limitations provided by the bill." (Emphasis added.) S. REP. NO. 91-552, 91st Cong., 1st Sess. 95, 98 (1969); "Farmers . . . have been excepted from these general rules [requiring inventories where the production or sale of merchandise is a significant factor] . . . . This

The changes made by the Tax Reform Act did not affect the average farmer or rancher greatly.[7] On the other hand, a steady administrative and judicial development of the basic concepts of agricultural taxation has been occurring for a number of years as a result of concern over the revenue consequences of tax methods used by cash basis agricultural taxpayers. Since a taxpayer receives no unwarranted benefit from the current deduction of costs of raising agricultural products unless the tax impact of the corresponding income is avoided by transfer to some other taxpayer, reduced by realization at capital gains rates, or deferred to a year in which it will occasion less tax, these three areas have been the most troublesome. An understanding of the cash method [8] as it operates in each of these areas is a prerequisite to an evaluation of the existing system, as well as of any proposals for further change.

Income Realization in Agriculture—The Interplay of the Concepts of Agricultural Taxation and Helvering v. Horst

Basic to the problem of assignment and deferral of agricultural income is the concept of income realization as it applies in this area. Most agricultural products are fungible and easily marketable, and as a conse-

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results in an inaccurate reflection of annual income in situations where expenditures are fully deducted in the year incurred, but the assets produced by those expenditures (inventories) are not sold, and the income not reported, until a later year." TREASURY DEP'T, TAX REFORM STUDIES AND PROPOSALS 153 (Joint Comm. Print, 1969); *cf. United States v. Catto*, 384 U.S. 102, 114-16 (1966); "The issue in the present case, however, is complicated by the substantial tax differential worked by the Treasury Regulations in favor of cash-method ranchers . . . . It is clear that application of the cash method . . . to sales of breeding livestock would substantially distort the economic picture of the respondents' ranching operations. The sacrifice in accounting accuracy under the cash method represents an historical concession by the Secretary and the Commissioner to provide a unitary and expedient bookkeeping system for farmers and ranchers in need of a simplified accounting procedure. A concomitant of the special dispensation that has been made available to cash-method ranchers is the favorable capital gain treatment that results whenever breeding livestock are sold."

[7] *See* note 5 *supra*.

[8] The use of the term "cash method" to encompass the rules governing the deduction of growing costs by cash basis farmers and ranchers may be semantically misleading. There is nothing inherent in the cash receipts and disbursements method of accounting which requires deduction of the costs of raising agricultural products. Taxpayers who produce merchandise for resale are ordinarily required to maintain inventories, Treas. Reg. § 1.471-1, and taxpayers who are required to maintain inventories are ordinarily required to use the accrual method of accounting, Treas. Reg. § 1.446-1(c)(2)(i). The deduction of growing costs by cash basis farmers and ranchers is authorized in Treas. Reg. § 1.162-12, and its predecessor regulations, *supra* note 1, and in the *Farmers Tax Guide*, 20-23 (1971). The exclusion of cash basis farmers and ranchers from the requirement of inventories is indicated, at least inferentially, by Treas. Reg. § 1.471-6. Since the deduction of costs of raising agricultural products is limited to taxpayers using the cash receipts and disbursements method of accounting, the term "cash method" as applied to taxation of agriculture is widely used to refer to the rules relating to such deductions.

quence the taxpayer is often in a position to control the time of receipt of the income which their sale will produce. When agricultural products are delivered into the stream of commerce, they may be represented by negotiable warehouse receipts which are, for practical purposes, equivalent to cash. Even prior to this point, the conversion of livestock and harvested crops to cash often requires only the farmer's willingness to accept the money. Should a taxpayer in this position be permitted to claim he has not realized income, however he may dispose of his produce?

There are a number of situations in which this problem may arise. Agricultural products may be given to a member of one's family or to charity prior to sale; they may be transferred to a corporation in exchange for stock, or transferred from a corporation as a dividend or in liquidation or in redemption of stock; they may be acquired by an estate from a decedent; they may be sold with land and as a part of the real estate.

The fruit-tree language of the *Horst*[9] decision seemed to suggest that income would be realized in such situations, and the extension of the assignment of income principle to agricultural taxpayers appeared to be a logical development. Thus, in 1948 the Commissioner took the position that income was realized by the donor, to the extent of the fair market value of his gift, upon the gift of wheat to charity [10] and upon the gift of feeder cattle to his son.[11]

There were serious problems in the Commissioner's approach. Under the anticipatory assignment of income doctrine, it is the receipt of the proceeds of sale by the donee and not the act of assignment that results in income to the donor.[12] Otherwise, as pointed out by the Tax Court, a taxable event would be created where one might otherwise never have occurred.[13]

More fundamentally, it is not the ability to market one's assets that generates taxable income; it is the act of marketing and the actual or constructive receipt of the proceeds of sale, in the case of a cash basis taxpayer, and the occurrence of all events which fix the right to receive the income and permit the amount to be determined with reasonable accuracy, in the case of an accrual basis taxpayer.[14] No other rule would be workable; otherwise it would be necessary to reflect in the taxpayer's return fluctuations which occur in the value of the marketable assets he holds. Ordinarily, it is the decision to market at a particular time which

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[9] *Helvering v. Horst*, 311 U.S. 112, 120 (1940); following *Lucas v. Earl*, 281 U.S. 111, 115 (1929).

[10] I.T. 3910, 1948-1 C.B. 15.

[11] I.T. 3932, 1948-2 C.B. 7.

[12] *Helvering v. Eubank*, 311 U.S. 122 (1940); *Siegel Productions, Inc.*, 46 T.C. 15 (1966); *Estate of Florence Carr*, 37 T.C. 1173 (1962); Rev. Rul. 58-275, 1958-1 C.B. 22; Rev. Rul. 63-66, 1963-1 C.B. 13.

[13] *W. G. Farier*, 15 T.C. 277 (1950).

[14] Treas. Reg. § 1.451-1(a); Rev. Rul. 58-162, 1958-1 C.B. 234.

governs the amount of income which will be realized from sales of agricultural products, and it is only after this decision has been made that the income will be received or accrued.

Quite properly, therefore, the Commissioner was defeated in his efforts to treat gifts of crops and livestock as income producing events [15] and was forced to accept the concept that transfers of unsold agricultural produce constitute transfers of property and not assignments of income, not only in the case of gifts,[16] but also in a variety of other situations.[17] There is no impropriety in such situations in taxing the transferee upon disposition of the product by him. In this context, the sale of the fruit is attributed to its owner, even if he is not the owner of the original tree.[18]

Disallowance of Costs

The Commissioner then developed an alternate approach. Conceding that the gift of agricultural products did not result in the realization of income by the donor, he took the position that the donor was not entitled to deduct the costs incurred in raising the crop, at least in the year of gift,[19] whether the gift was to an individual or to a charity. In the case

[15] *Ralph Romine,* 25 T.C. 859 (1956), *acq.,* 1956-1 C.B. 5; *White v. Broderick,* 104 F. Supp. 213 (D. Kan. 1951), *appeal dismissed on appellant's motion,* 198 F.2d 751 (10th Cir. 1952); *Campbell v. Prothro,* 209 F.2d 331 (5th Cir. 1954).

[16] Rev. Rul. 55-531, 1955-2, C.B. 520; Rev. Rul. 55-138, 1955-1 C.B. 223; Rev. Rul. 58-436, 1958-2 C.B. 366; Rev. Rul. 57-490, 1957-2 C.B. 231.

[17] Unsold agricultural products not income in respect of a decedent, step-up in basis allowable: Rev. Rul. 58-436, 1958-2 C.B. 366; *Estate of Tom L. Burnett,* 2 T.C. 897 (1943), *acq. on issue as to raised livestock and feed,* 1944 C.B. 4; *Perry v. United States,* 58-2 USTC ¶ 9587, 1 AFTR 2d 2028 (N.D. Miss. 1958); *in accord,* Treas. Reg. § 1.691(a)-2(b), Example (5)(1); cf. Rev. Rul. 68-154, 1968-1 C.B. 395, (step-up in basis, optional valuation date, interest in agricultural partnership). No assignment of income in section 351 incorporation: *Rooney v. United States,* 305 F.2d 681 (9th Cir. 1962); *Central Cuba Sugar Co. v. Comm'r,* 198 F.2d 214 (2d Cir. 1952), *cert. denied,* 344 U.S. 874 (1952). No income created by distribution of crops as dividend: Rev. Rul. 57-490, 1957-2 C.B. 231. Liquidation of accrual basis subsidiary into parent under I.R.C. § 334(b)(2): *Comm'r v. South Lake Farms, Inc.,* 324 F.2d 837 (9th Cir. 1963); *cf. Winer v. Comm'r,* 371 F.2d 684 (1st Cir. 1967) (*South Lake Farms* decision not applicable to manufacturing). Sale of crop with land: I.R.C. § 1231(b)(4); not applicable to assignment of crop and leasehold estate: *Nutt v. Comm'r,* 351 F.2d 452 (9th Cir. 1965), *cert. denied,* 384 U.S. 918 (1966); *cf. Olin Bryant,* 46 T.C. 848 (1966) (ABC deals not applicable to agricultural products). Value of growing crops not subject to income tax at death: *Perry v. United States,* 58-2 USTC ¶ 9587, 1 AFTR 2d 2028 (N.D. Miss. 1958); *Estate of Tom L. Burnett,* 2 T.C. 897 (1943), *acq. on issue as to raised livestock and feed,* 1944 C.B. 4.

[18] Although rights to an unsold crop are not ordinarily considered equivalent to rights to accrued income, a transfer of a crop which has been previously sold is in effect an assignment of the proceeds of sale, and taxable as an anticipatory assignment of income. *Adolph Weinberg,* 44 T.C. 223 (1965), *aff'd in part and rev'd in part, sub. nom. Comm'r v. Sugar Daddy, Inc.,* 386 F.2d 836 (9th Cir. 1967), *cert. denied,* 392 U.S. 929 (1968); *cf. Greer v. United States,* 408 F.2d 631 (6th Cir. 1969) (sale of a "racing interest" in a racehorse).

[19] Rev. Rul. 55-531, 1955-2 C.B. 520; Rev. Rul. 55-138, 1955-1 C.B. 223.

of charitable donors, the Commissioner was supported by Treasury Regulations.[20] The tax advantages of such gifts have now been eliminated by statute.[21] Similarly, where crops are transferred to a corporation under section 351 the Commissioner has been able to reallocate costs under section 482 so as to deny to the transferor deductions for costs incurred by him prior to transfer, but related to income realized thereafter by the corporation.[22] Deductions prior to a corporate reorganization have been reallocated on the same basis.[23] Although the Commissioner has ruled that the distribution of crops as a dividend does not produce income to the declaring corporation, he disallows growing costs for the current and all prior years in such cases.[24]

Congress has followed the same approach. Although it has permitted capital gain treatment on the sale of a crop with the land on which it is situated,[25] current as well as prior growing costs are disallowed as deductions.[26]

The cost capitalization approach is being applied with increasing breadth in agriculture. In the recent decision of *Spitalny v. United States*,[27] the Ninth Circuit held that where a corporation engaged in the business of cattle feeding had deducted as an expense feed and supplies which it sold later in the same year during the course of a section 337 liquidation, costs previously incurred for such feed and supplies were to be disallowed. The court reached this result under an extension of the so-called "tax benefit rule," under which accounts written off as bad debts and later recovered are restored to income in a liquidation under this section.[28] It recognized that where both deductions and offsetting recovery occur in the same taxable year, the use of the "tax benefit rule" label is inappropriate, but concluded that the same principles would apply with even greater force in a case where an agricultural taxpayer using the cash basis has taken deductions for feed and supplies not consumed in production and for which value is received.[29]

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[20] Treas. Reg. § 1.170-1(c); *cf. Wylie v. United States*, 281 F. Supp. 180 (N.D. Tex. 1968).

[21] I.R.C. § 170(e)(1)(A).

[22] *Rooney v. United States*, 305 F.2d 681 (9th Cir. 1962). Neither section 482 nor section 446(b) disallows the deductions of an accrual basis subsidiary liquidating its assets into its parent. *Comm'r v. South Lake Farms, Inc.*, 324 F.2d 837 (9th Cir. 1963).

[23] *Central Cuba Sugar Co. v. Comm'r*, 198 F.2d 214 (2d Cir. 1952), *cert. denied*, 344 U.S. 874 (1952).

[24] Rev. Rul. 57-490, 1957-2 C.B. 231; *cf. Comm'r v. First State Bank of Hartford*, 168 F.2d 1004 (5th Cir. 1948), *cert. denied*, 335 U.S. 867 (1948).

[25] I.R.C. § 1231(b)(4).

[26] I.R.C. § 268; Treas. Reg. § 1.268-1. Applicable to crops sold in liquidation of a corporation under section 337, *Beauchamp & Brown Groves Co.*, 44 T.C. 117 (1965).

[27] 430 F.2d 195 (9th Cir. 1970).

[28] *West Seattle Nat'l Bank of Seattle v. Comm'r*, 288 F.2d 47 (9th Cir. 1961); *cf. Comm'r v. Kuckenburg*, 309 F.2d 202 (9th Cir. 1962) *cert. denied*, 373 U.S. 909 (1963).

[29] The court found no difference, in principle, between the disallowance of an item

It is apparent, therefore, that the Commissioner now has considerable authority to capitalize or disallow costs previously incurred in raising agricultural products which are disposed of in a way which does not result in the realization of income. In this area the cash method as applied to agricultural taxpayers no longer affords any substantial opportunities for deductions which are not offset by the related income.

Crop Proceeds as Income in Respect of a Decedent

Notwithstanding these developments, the concept that crops are "property" under *Helvering v. Horst,* as distinguished from "income rights," has enjoyed an uneasy existence. In 1954 the Commissioner persuaded the Ninth Circuit in *Commissioner v. Linde* [30] that where agricultural products are delivered prior to death to a cooperative association and commingled by it with the produce of others, income received by the decedent's estate on a subsequent sale of the estate's interest in the commingled products will be treated as "income in respect of a decedent" under section 691. As a consequence, the estate, in computing gain on sale of the products, did not enjoy the step-up in basis which it otherwise would have enjoyed under section 1014.[31] The *Linde* decision was incorporated in the Treasury Regulations in 1957.[32]

Although for state law purposes, it was clear that the taxpayer in *Linde* had a property interest in the pooled produce, the decision is based on the conclusion that the decedent had only a contractual right to receive income at the time of death. *Linde,* therefore, is not necessarily inconsistent with the concept that a transfer of crops represents a transfer of property and not of income rights for tax purposes.

Whether the *Linde* decision is to be regarded as inconsistent with the construction of *Helvering v. Horst* as applied to agriculture, the extension in *Linde* of the "income in respect of a decedent" category has been regarded as questionable.[33] The purpose of section 691 as it applies to cash basis decedents is to tax to an estate income which would otherwise escape taxation because it has accrued but has not been received at the date of death.[34] The fact that negotiations for the sale of a

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of expense incurred in the current year, and the restoration to income of an item expensed in a prior year. 430 F.2d 195, 198. The amount restored is limited to the amount previously deducted, and the restoration rule applies to accrual as well as cash basis taxpayers. *Bishop v. United States,* 71-1 USTC ¶ 9165 (D. Ga. 1971).

[30] 213 F.2d 1 (9th Cir. 1954), *cert. denied,* 348 U.S. 871 (1954).

[31] I.R.C. § 1014(c).

[32] Treas. Reg. § 1.691(a)-2(b), Example (5)(2), first published as T.D. 6257, 1957-2 C.B. 419.

[33] Ferguson, *Income and Deductions in Respect of Decedents and Related Problems,* 25 TAX L. REV. 1, 45-46 (1969); Young, *Linde Decision Confuses Tax Treatment of Cash Basis Decedent's Inventory,* 4 J. TAX. 160-62 (1956); Note, *Income in Respect of Decedent: The Scope of § 126,* 65 HARV. L. REV. 428, 444-45 (1952).

[34] *Davidson's Estate v. United States,* 292 F.2d 937, 941 (Ct. Cl. 1961), *cert. denied,* 368 U.S. 939 (1961). The alternative of taxing all accrued income of cash basis tax-

decedent's property have preceded his death,[35] or even that he has entered into an executory contract,[36] will not ordinarily subject the proceeds of a sale consummated after his death to the provisions of section 691. Neither the *Horst* rule nor the concept underlying section 691 appear to justify the accrual at the date of death of income of a cash basis taxpayer which has not been actually or constructively received.

Crop Shares as Rents

A substantial exception to the general rule that agricultural produce is to be regarded for income assignment purposes as property, and not as a right to income, has developed from the *Linde* case. In *Davidson's Estate v. United States*,[37] the Court of Claims sustained the Commissioner's position, inconsistent with his own prior Revenue Ruling,[38] that crops received by a decedent as his share of those grown on his land under a sharecrop arrangement resulted in income in respect of a decedent to his estate when later sold. Even if the contractual rights which Linde had in pools of unsold wine are regarded as accrued rights to income, it would not seem to follow that a distinction should be made for purposes of section 691 between produce owned by a taxpayer who provided the land on which it was grown, and produce owned by one who provided the labor, seed and fertilizer. In any event, the *Linde* and *Davidson* decisions must rest primarily on the construction of section 691, and not on the principle of *Helvering v. Horst*. Nevertheless, from this beginning, crop shares received by agricultural landowners for the use of their land have been held to have a special status under the anticipatory assignment of income doctrine in a wide variety of situations,[39] and are not distinguished from agricultural produce grown by the farmer himself for such purposes.

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payers in their last returns, regardless of the date ultimately received, could result in the accrual of several years' income in one return. *O'Daniel's Estate v. Comm'r*, 173 F.2d 966 (2nd Cir. 1949).

[35] Treas. Reg. § 1.691(a)-2(b), Example (5)(1).

[36] Treas. Reg. § 1.691(a)-2(b), Example (4); Ferguson, *supra* note 33, at 43-52; M. FERGUSON, FEDERAL INCOME TAXATION OF ESTATES & BENEFICIARIES 147 (1970).

[37] 292 F.2d 937, 941 (1961), *cert. denied*, 368 U.S. 939 (1961).

[38] Rev. Rul. 58-436, 1958-2 C.B. 366.

[39] Rev. Rul. 63-66, 1963-1 C.B. 13 (donor of warehouse receipts representing crop shares received as rent must include in income amounts received by donee upon sale of crops); *Tatum v. Comm'r*, 400 F.2d 242 (5th Cir. 1968) (gift of warehouse receipts for crop shares to charity, donors taxable); *contra, Peterson v. United States*, 65-2 USTC ¶ 9672, 16 AFTR 2d 5761, (E. D. Wash. 1965); Rev. Rul. 64-269, 1964-2 C.B. 173 (crops received as rental constitute income in respect of a decedent, prorated to date of death), *modifying* Rev. Rul. 58-436, 1958-2 C.B. 366; *ABCD Lands, Inc.*, 41 T.C. 840 (1964) (income from sale by shareholders of crop shares distributed in kind by corporation "imputed" to corporation for income tax purposes); Rev. Rul. 64-32, 1964-1 C.B. 319; *Farmers' Tax Guide*, 41-42 (1971) (self-employment income under section 1402); Rev. Rul. 55-538, 1955-2 C.B. 313; Rev. Rul. 54-447, 1954-2

This treatment of crop shares as income rights appears to be inconsistent with the regulations governing the realization of such income, which provide that "crop shares (whether or not considered rent under state law) shall be included in gross income as of the year in which the crop shares are reduced to money or the equivalent of money." [40] It has been suggested that this is a rule of convenience only,[41] and that since an assignment of other types of rents by a landlord is subject to the *Horst* decision, there is no reason that crop shares should be an exception.[42]

There are reasons other than convenience to defer the recognition of gain on crop shares until the crops are sold. Generally a landowner who farms on shares is regarded as having an interest in the crop from the time it is first planted.[43] Thus, the landowner and farmer both contribute to the production of the crop, each owns his respective share of it, and each is entitled to treat his share as his own property when he sells it. From this point of view, the harvest and delivery of the landowner's share of the crop does not result in the payment of rent.

The alternative possibility of taxing a landlord on the fair value of crops received by him under a sharecropping arrangement would have several ramifications. In the first place, when the crop is sold by the landowner, he would ordinarily realize gain or loss again. The existing treatment of sharecrop arrangements avoids these problems, provides a single taxable event, and ordinarily results in no loss of revenue.

The Material Participation Concept

The ease of avoidance provides another reason to question the crop shares rule. The landowner who participates with his tenant, to a material extent, in management or expenses is ordinarily deemed to be a farmer and not a renter. Material participation leases have been held sufficient to avoid classification of crop proceeds [44] and soil bank payments made in lieu of them [45] as personal holding company income

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C.B. 351 (tenant's status as employee); Rev. Rul. 60-32, 1960-1 C.B. 23 (soil bank payments); Rev. Rul. 58-482, 1958-2 C.B. 273; *United States v. Myra Foundation*, 382 F.2d 107 (8th Cir. 1967) (not unrelated business taxable income under section 512).

[40] Treas. Reg. § 1.61-4, applicable to both cash and accrual basis farmers. The latter are not permitted to include crop shares received as rent in inventory, Rev. Rul. 56-496, 1956-2 C.B. 17.

[41] Eustice, *Contract Rights, Capital Gain, and Assignment of Income*, 20 TAX L. REV. 1, 56 (1964); *followed, Tatum v. Comm'r*, 400 F.2d 242 (5th Cir. 1968).

[42] *Galt v. Comm'r*, 216 F.2d 41 (7th Cir. 1954); *United States v. Shafto*, 246 F.2d 338 (4th Cir. 1957).

[43] 52A C.J.S. *Landlord & Tenant* § 810; *Renfrow v. Lancaster*, 31 S.W. 229 (Tex. Civ. App. 1895); *Thomas v. Callaway*, 251 S.W.2d 921 (Tex. Civ. App. 1952) ref. n.r.e.; *Miles v. Dorn*, 90 S.W. 707 (Tex. Civ. App. 1905).

[44] *Comm'r v. Webster Corp.*, 240 F.2d 164 (2d Cir. 1957).

[45] Rev. Rul. 60-32, 1960-1 C.B. 23; Rev. Rul. 67-423, 1967-2 C.B. 221.

and as passive investment income for purposes of subchapter S.[46] Income from such leases has been classified as self-employment income under section 1402.[47] Rents under such leases are not unrelated business taxable income under section 512.[48] There are a wide variety of possible arrangements between landowners and farmers who are compensated on shares, but if one wishes to be classified as a farmer or rancher for tax purposes, he may ordinarily do so without serious change in his economic position by reserving a voice in the conduct of operations on his land, and by allocating to himself a share of some of the costs of production accompanied by a corresponding increase in his share of the proceeds of sale.

It appears, therefore, that the treatment of crop shares as rights to income for purposes of the *Horst* rule is a questionable response to tax benefits derived from cash basis deductions in particular situations. *Helvering v. Horst* applies to accrual as well as cash basis taxpayers;[49] it cannot solve the problems generated by deduction of growing costs in agriculture without creating more problems of its own. It is anomalous that the principal situation in which an assignment of agricultural produce is treated as an anticipatory assignment of income involves landowners who lease on shares, whose deductions consist primarily of interest and taxes, and who are unlikely to benefit materially from the deduction of growing costs.

Capital Gains in Agriculture

The second area in which the use of the cash method as it is applied in agriculture has been troublesome from a revenue standpoint, and the one which has attracted the most attention recently,[50] is the deduction of the costs of developing agricultural property, and especially breeding livestock, which can be subsequently sold at capital gains rates. In this area the benefits of prior deductions are offset to some extent by more stringent requirements for capital gains than those applicable to taxpayers generally.[51] In the Tax Reform Act these requirements were increased. Under it the holding period required in order for livestock to be classified as depreciable property used in the trade or business of

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[46] Rev. Rul. 61-112, 1961-1 C.B. 399; *cf.* Treas. Reg. § 1.1372-4(b)(5)(vi).

[47] Rev. Rul. 64-32, 1964-1 C.B. 319; *Foster v. Celebrezze*, 313 F.2d 604 (8th Cir. 1963); *Celebrezze v. Miller*, 333 F.2d 29 (5th Cir. 1964); *Farmer's Tax Guide*, 41-42 (1971).

[48] Rev. Rul. 58-482, 1958-2 C.B. 273; *United States v. Myra Foundation*, 382 F.2d 107 (8th Cir. 1967).

[49] *Freidman v. Comm'r*, 346 F.2d 506 (5th Cir. 1965).

[50] Davenport, *A Bountiful Tax Harvest*, 48 Texas L. Rev. 1 (1969); Hawkinson, *Farm Expenses and General Accounting Principles*, 22 Tax L. Rev. 237 (1967).

[51] I.R.C. § 1231(b)(3).

the taxpayer, which had already been extended to one year as compared to the six months' period required of other taxpayers,[52] was further extended to two years in the case of cattle and horses.[53] In section 1251,[54] taxpayers with substantial outside income are now required to recognize certain gains as ordinary income instead of capital gains if they have in the past offset farm losses against non-farm income in excess of specified amounts. In addition, the 1969 Act provides for the partial conversion of gain on the sale of farm land to ordinary income where the property has been previously improved by deductible expenditures for soil and water conservation or for land clearing.[55] The exclusion of agricultural taxpayers from the recapture provisions of section 1245 was also eliminated.[56] This exclusion was the principal remaining capital gains advantage in the Internal Revenue Code itself for the benefit of agricultural taxpayers, as compared to those in other walks of life.

The most questionable use of capital gains in agriculture is found in tax-gimmick schemes designed to produce large ordinary deductions followed by maximum capital gains, such as the rent-a-cow plans, syndicated buildups of breeding herds for potential resale, and the like. There may be answers in the existing case law to such deliberate efforts to maximize use of the capital gains provisions of the Code. Where the promotional literature or surrounding circumstances disclose a preconceived plan to sell the herd when developed, or to sell the progeny of the rented cow, may this not indicate that the animals were acquired and held for sale? [57] If deliberate operating losses are realized for a series of years in the buildup of a herd under a plan to maximize tax benefits, rather than operational opportunities, are the losses deductible? [58] If "rent" is paid on a cow to obtain her calf, is not the "rent' in fact the purchase price of the calf? [59]

Whether a reduced rate of tax on gain from the sale of depreciable property used in business is justified is a matter of policy, but when

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[52] § 342 Int. Rev. Act of 1951, *amending* § 117(j)(1) of Internal Revenue Code of 1939.

[53] Tax Reform Act of 1969 § 212, *amending* I.R.C. § 1231(b)(3).

[54] Tax Reform Act of 1969 § 211.

[55] Tax Reform Act of 1969 § 214.

[56] Tax Reform Act of 1969 § 212(a).

[57] *Stockton Harbor Indus. Co. v. Comm'r,* 216 F.2d 638 (9th Cir. 1954), *cert. denied,* 349 U.S. 904 (1955); *Malat v. Riddell,* 383 U.S. 569 (1966) (per curiam).

[58] *Cf. Bessenyey v. Comm'r,* 379 F.2d 252 (2d Cir. 1967).

[59] I.R.C. § 162(a), "There shall be allowed as a deduction . . . (3) rentals or other payments required to be made as a condition to the continued use or possession, for purposes of the trade or business, of property *to which taxpayer has not taken or is not taking title or in which he has no equity.*" (Emphasis added.) *M & W Gear Co.,* 54 T.C. 385 (1970).

tax-gimmick transactions such as those described above are excluded, one wonders whether agriculture receives a disproportionate share of capital gains benefits. As an industry, it requires a relatively large capital investment which provides a comparatively low return. Capital gain provisions have been justified, by their proponents, as permitting replacement of capital assets and assets required in business production without excessive reduction of the funds available for reinvestment due to taxes. The evaluation of the relative position of agricultural taxpayers, from a capital gains standpoint, is thus a complex problem which involves a balancing of the deductions which cash basis farmers and ranchers receive against the capital gains penalties that apply to them, a comparison of the impact of capital gains in agriculture with that in other industries, a determination to the public policy to be effected, and a consideration of possible alternative approaches.

The Use of Inventories in Agriculture

The alternative which has been most recently suggested is to require inventories of all farmers and ranchers.[60] This might, in theory, be done in either of two ways. One would be to require the adoption of the accrual method for all items of expense and income. The other would be to continue to authorize the cash method for normal recurring expenditures, but to require annual inventories of livestock and harvested crops.[61]

It should be recognized at the outset that the problem which has been of primary concern to the Treasury and Congress—that of deducting against ordinary income the costs of developing herds which are ultimately sold as breeding stock at capital gains rates—would not be solved by subjecting farmers and ranchers to the same inventory requirements that apply to manufacturers and other producers of goods. Normally, inventory accounting relates to merchandise manufactured or purchased for resale, and includes raw materials, goods in process, and finished products held for sale.[62] Depreciable property used in the trade or business is not ordinarily included in inventory.[63] Thus, subjecting farmers to usual inventory practices would not, in itself, affect the taxation of breeding stock.

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[60] *See* note 6 *supra*.

[61] Growing or standing crops are not included in inventory unless such crops were purchased. I.T. 1368, I-1 C.B. 72 (1922); *Farmer's Tax Guide* 24 (1971); *cf.* Rev. Rul. 68-216, 1968-1 C.B. 216. An accrual basis hatchery operator must inventory eggs in process of incubation and pre-market chickens.

[62] Treas. Reg. §§ 1.471-1, -3, and -4.

[63] I.R.C. § 1231(b)(1). Depreciation is not allowable on inventories or stock in trade. Treas. Reg. § 1.167(a)-2.

There are other difficulties in the proposal that farmers and ranchers be required to use inventories. The fundamentals of accrual accounting as usually applied to a manufacturer or other producer require that the direct costs of manufacture be deducted when the product is sold, and that the indirect costs be included in computing cost of goods sold by some consistent method of accounting.[64] Larger enterprises ordinarily use cost accounting systems to allocate overhead expenses to the units produced. In the case of an agricultural operation such as ranching, most of the taxpayer's costs are likely to consist of costs of land ownership and maintenance and other overhead and indirect expenses. The deduction of these costs as costs of goods sold would involve allocations to various classifications of breeding stock, animals held for sale, and other ranch products which would be largely arbitrary.

In practice, even where "full absorption costing" of overhead is employed, substantial expenditures may be deducted rather than allocated to cost of goods sold under existing decisions.[65] Furthermore, although it may not be the preferred method, "direct costing," in which inventory is charged only those costs which vary with volume of production, has been considered an acceptable inventory practice.[66] Where self-constructed assets have been involved, the "prime cost" method, in which the only items capitalized are direct labor plus materials used, has been approved.[67] Many ranches employ little labor other than that needed for routine operations, such as maintenance of fences, and purchase little feed, and in such cases the prime cost and other hybrid methods would result in the capitalization of relatively small amounts. For this reason, an inventory requirement for breeding stock would not necessarily have a substantial effect on the amount of capital gains realized in many cases.

The Treasury Regulations expressly recognize the difficulties in ascertaining the actual cost of raised livestock and other farm products,[68] and for this reason authorize two alternatives to the accrual method. Under the "unit-livestock" method, animals are valued at a standard unit price which is designed to reflect the normal raising costs, and

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[64] Treas. Reg. §§ 1.446-1(c)(ii), 1.61-3(a), 1.471-1; *cf.* Treas. Reg. § 1.471-3(c).

[65] *All Steel Equipment, Inc.*, 54 T.C. 1749 (1970); *cf.* Treas. Reg. § 1.446-1(e)(2)(iii) as amended by T.D. 7073, 1970-2 C.B. 98, Example (7).

[66] *The Geometric Stamping Co.*, 26 T.C. 301 (1956); *Photo-Sonics, Inc. v. Comm'r*, 357 F.2d 656 (9th Cir. 1966); Rev. Rul. 141, 1953-2 C.B. 101. A taxpayer using the accrual method of accounting with respect to purchases and sales of merchandise may use the cash method in computing all other items of income and expense. Treas. Reg. § 1.446-1(c)(iv). The provisions in prior regulations to the contrary (Treas. Reg. 118, § 39.41-2; Treas. Reg. 111, § 29.41-2; Treas. Reg. 103, § 19.41-2) have now been deleted.

[67] *Fort Howard Paper Co.*, 49 T.C. 275 (1967); *Bernard B. Carter*, T.C. Memo 1957-65, *aff'd* 257 F.2d 595 (5th Cir. 1958); *cf. All Steel Equipment, Inc., supra* note 65; *cf. Dearborn Gage Co.*, 48 T.C. 190 (1967).

[68] Treas. Reg. § 1.471-6(c). See also I.T. 3666, 1944 C.B. 270.

under the "farm-price" method agricultural produce is valued at market price less direct costs of disposition.[69] In neither is the farmer required to determine the actual cost of the goods sold by him during the accounting period, or the cost of goods on hand at its end. On the other hand, neither permits the exclusion from inventory costs of overhead expenses which may, to a varying extent, be deducted by other taxpayers who maintain inventories and who develop assets used in production. Furthermore, under the unit-livestock method, breeding, draft, and dairy stock must also be included inventory,[70] which deprives the farmer of the depreciation on such animals which would be allowable to him if he used the accrual system,[71] and under the farm price method profit on unsold production must be included in income.[72] Thus, although these special inventory methods may achieve their stated purpose of overcoming the problems involved in determining actual inventory costs, they do so by requiring agricultural taxpayers to use values which, to varying extents, depart from those required of other taxpayers.

For these reasons, the proposal that inventories be required in agriculture as a means of recapturing previously deducted costs on sale of breeding stock fails in some respects to deal with the problem and is likely in many cases not to recapture the desired income. In addition, mandatory inventories would inevitably prompt a demand for the same six months holding period for livestock that is a prerequisite to capital gains treatment elsewhere.

Unmatched Income and Deductions

The usual purpose of inventories is unrelated to the conversion of ordinary income to capital gain; it is to assign to each period its proper income and expense[73] and to prevent the deduction of the costs of manufacture or production prior to the sale of the product. A satisfac-

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[69] Treas. Reg. §§ 1.471-6, 1.162-12, 1.61-4, and 1.446-1(c)(iii). A third alternative, the "crop" or "crop cost" method, is also permitted. Under this method, the cost of a crop is charged to "deferred crop costs" as incurred and then written off as the crop is sold. However, even costs of crops that take more than one year to raise may be written off as incurred provided consistently treated from year to year. Treas. Reg. § 1.162-12.

[70] Treas. Reg. § 1.471-6(f); *United States v. Catto*, 384 U.S. 102 (1966).

[71] Under the accrual system, the farmer may elect to inventory or capitalize and depreciate breeding stock. *Farmer's Tax Guide* 24 (1971); Treas. Reg. § 1.471-6(c); *cf.* Treas. Reg. § 1.263(a)-2: costs incurred in constructing or developing business assets having a useful life of over one year must be capitalized without regard to the method of accounting used.

[72] Since under the farm price method unsold goods at the end of the year are inventoried at market value, less cost to ship to market, Treas. Reg. § 1.471-6(d), the cost of goods sold during the year is reduced not only by cost of goods unsold at the end of the year, but also by the profit (less cost of disposition) on such goods, thereby increasing profit on goods sold by a like amount.

[73] *Lucas v. Kansas City Structural Steel Co.*, 281 U.S. 264 (1930); *U.S. Cartridge Co. v. United States*, 284 U.S. 511 (1932).

tory system of agricultural inventories, by requiring the deduction of growing and raising costs in the period in which the corresponding income is realized, would serve this purpose.

From a policy standpoint, the deferral of income by the profit motivated farmer or rancher is probably less of a problem than the other issues we have considered. For economic reasons, it is ordinarily necessary for farmers and ranchers to incur costs and realize income on an annual basis, whether the crop consists of grain, calves, fruit or other produce. Nevertheless, a farmer may be able to "carry over" certain types of products for a limited period, either in hope of a better price, or to defer the realization of gain for tax purposes. In this way, he may be able to even out fluctuations in income and to postpone the payment of tax. But the trend in federal taxation is toward increased liberality in income averaging, carry-forwards and carry-backs. So long as all of the taxpayer's income is reported, the possibility of some shifting from one year to another may not be seriously objectionable.

As a practical matter, income shifting possibilities will continue to exist in agriculture even with inventories, since the farmer who maintains inventories may accelerate or defer the sale of his produce as easily as one who does not. The deductions available under the cash method may accentuate the tax effect of a postponed sale, but except insofar as the applicable tax rate may vary from year to year, the separation of the date of deduction from the date of sale will produce no difference in ultimate tax liability.

Conclusion

Under our existing tax structure, no industry is subject to a simple and uniform set of rules equally applicable to all taxpayers. Until such a utopian system is devised, we are faced with the necessity of administering the existing system in such a way so as to achieve as much equity as possible and at the same time to be no more burdensome on any particular area of the economy than is required to produce the necessary revenue.

It is a matter of judgment whether on balance these objectives are achieved under the cash method as it is now applied in agriculture. As we have seen, existing law has largely foreclosed the possibility of tax avoidance by deducting the costs of agricultural production accompanied by the disposition of the products prior to realization of income from their sale. Capital gains conversion through deduction of the costs of raising breeding livestock is offset, to an extent which is difficult to evaluate, by longer holding requirements than those applicable to other taxpayers. There are opportunities for agricultural taxpayers to defer taxable income by methods of tax accounting which are available to them, but it is not clear that these opportunities exceed those available

to other taxpayers or that they create, in themselves, any serious revenue problems. In any event, if it were determined that the existing method of taxation of farmers and ranchers who use the cash receipts and disbursements method of accounting should be changed, it is not clear that the requirement of inventories would be either effective or appropriate for such purposes.

Any evaluation of the cash method as applied in agriculture can only be made in the context of the policy to be effectuated. Although those with capital often decry our income tax system, it is at the present time essentially capitalistic in the sense that to a taxpayer with substantial earned income, the alternative to high taxes is often the adoption of a program of investment in an area in which deductible costs of ownership and development may be speculated for future appreciation and profits. The trend appears to be to continue, and even to expand the tax incentives to make such investments, but to assure that income which is realized from them does not escape tax and that taxes lost through previously deducted costs are recaptured.

Undoubtedly, agriculture has had its share of investors who are willing to forego the use of funds for personal purposes in favor of investment in farm or ranch property. Where recreational motives are paramount, it is clear that such taxpayers are not entitled to deduct the expenses they incur, except for specific items, such as interest and taxes, which are deductible in any event.[74] Even where recreational motives are not primary, difficult questions of policy may be raised where a desire to make profits or to minimize the losses of land ownership by using it for agricultural purposes exist in combination with non-commercial objectives, such as the satisfaction of owning and improving a farm or ranch, or breeding livestock, dogs, or horses.[75]

As a result of these problems, there have probably been more tax barriers erected against outside investors in agriculture than against those entering any other industry. The divergent treatment of crop shares received by a landowner has been explained on the basis that the recipient is not a farmer;[76] the so-called hobby loss cases have often turned on the fact that agriculture was not the principal endeavor of the taxpayer.[77] The provisions of section 1251 of the Code relate only to investors in agriculture with substantial non-farm income, and the provisions of section 183 are directed primarily to identification of the

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[74] I.R.C. § 183.

[75] "Generally speaking, the Board and the courts have been liberal to find the requisite greed." *Weir v. Comm'r*, 109 F.2d 996, 997 (3rd Cir. 1940).

[76] *Tatum v. Comm'r*, 400 F.2d 242 (5th Cir. 1968).

[77] The recent cases are collected in *Important Developments in Agriculture*, 22 THE TAX LAWYER 788, 792 (1969); 21 THE TAX LAWYER 762, 768 (1968); 20 THE TAX LAWYER 139, 143 (1967).

non-profit motivated investor in farming and ranching. It appears likely that most of the concern over the cash method as it is used in agriculture in fact reflects dissatisfaction with tax benefits received by outside investors in unprofitable agricultural ventures, and not dissatisfaction with the cash receipts and disbursements method as it is applied to the ordinary farmer or rancher.

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A Beautiful Tax Harvest

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A BOUNTIFUL TAX HARVEST

CHARLES DAVENPORT*

Professor Davenport traces the development of the "farm loss" inequity and analyzes the possible remedies. He meticulously examines the proposed solutions now before Congress, explains why he favors Senator Metcalf's Bill, and expresses his fear that division within the ranks will defeat reform.

I. INTRODUCTION

The nation's income tax law takes its form from its various chitects. Congress has the initial chance to structure it. Then the reasury promulgates regulations. These sources are subsequently terpreted by the courts in deciding cases and by the Internal Revue Service in many administrative proceedings. Each institution undoubtedly reacting to a peculiar set of pressures and to special guments being exerted at the moment. As a consequence, the law any time may be something that just happened. It is not surprisg that a system growing like Topsey may sometimes reach a topsyrvy result.

At this writing, several industries, notably oil and gas, real este, perhaps timber, and some farming, offer this opportunity. This per, however, is limited to the "farm loss" problem, but it seems kely that the conclusions and analytic techniques set forth are equally plicable in any case in which premature deductions are allowed r the cost of assets, while also conferring capital gain treatment on e sales proceeds to the extent they exceed any basis the property ay have. Thus the conclusions and techniques discussed herein ight just as easily apply to depreciation on real estate unless this duction is sharply reduced by the current tax reform proposals.

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The "farm loss" problem arises from the deduction of capit costs while allowing sales proceeds to be treated as capital gain. W shall first trace briefly the development of the tax law in agricultu to ascertain just how we got where we are. Then we shall turn a demonstration of the benefits afforded by the tax law. Thereaft the areas of principal application shall be outlined, and finally son solutions currently proposed will be evaluated.

II. Growth of the Tax Harvest

A. *A Seed Is Planted*

One root of the farm problem lies in a number of administ tive decisions made very early in the game. A Treasury Decisio in 1915 and regulations issued under the Revenue Act of 191 provided that the farmers could report their income on either t cash or accrual method of accounting. More importantly, the sa authority gave the farmers permission to dispense with accounti practices employed by other businesses and permitted them to ded livestock-raising costs even though they were capital expenditures.

This decision seems to have been prompted by several consid ations. First, since the identification of specific costs attributable particular animals on hand at year's end would have been very d cult, the easy answer was to ignore such costs. Furthermore, accounting principles of the time appear to have been unsophi cated and unprepared to deal with the problem of segregating a capitalizing costs associated with livestock. Finally, there was undou edly some notion that the average farm did not represent the t of investment or financial acumen usually found in other busin operations. To ask that expensive accounting techniques be emplo would not only have overburdened the investment, but would a have overtaxed the farmer's financial management capacity.[3] In sense, farms were just not considered businesses.

These early regulations also addressed themselves to the amou incurred in the development of orchards and ranches. Contrary the rule for livestock, the initial regulations required these costs be capitalized.[4] Presumably, the inconsistency of allowing livest

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1 T.D. 2153, 17 Treas. Dec. Int. Rev. 101 (1915), *as amended*, T.D. 2665, 20 T Dec. Int. Rev. 45 (1918).

2 Treas. Reg. 33, art. 4 (1917).

3 United States v. Catto, 384 U.S. 102, 110 (1966).

4 Treas. Reg. 33, art. 4 (1917).

ırmers an immediate writeoff while requiring capitalization of de-
elopment costs of orchards and ranches was raised, and the issue
as resolved for deductibility of both kinds of expenses when the
ext regulations were issued in 1919.[5] Case law stemming from this
ra indicates that, left to its own devices, the judiciary would have
eached contrary results for those development costs.[6]

When these liberal rules, the expensing of raising and develop-
ıg costs, were formulated, they had but one effect on tax liabilities.
'he deductions were premature and created artificial tax losses, which
ould not have arisen had the costs been properly capitalized. These
rtificial tax losses offset income from other sources and permitted
deferral of tax liabilities on other income until the farm assets
ere sold. This gross mismatching of income and expense could be
lerated when tax rates were relatively low. They became quite an-
her matter when, as later explained, they combined with very high
rdinary income rates and lower capital gains rates on many farm
sets.

The point of recounting the historical is that these liberal ac-
unting rules were developed by an administrative agency under
statute requiring that income be properly reflected. While expedi-
ıcy might be their chief justification, there is nothing to indicate
at their impact as a stimulant for investment in farm assets was
er considered. Indeed, that consideration would have been im-
oper. Furthermore, it is doubted that they originally had any
ch effect; instead, they dealt with difficult accounting problems.

. *The Flower Blooms*

Congress discovered capital assets in the Revenue Act of 1921.
did not see fit, however, to include within that category depre-
able property used in the trade or business. We were later told
at this property had been excluded in order to assure full deduct-
ility of losses.[7]

Whatever the reason for excluding these assets from the pre-
rred treatment, World War II brought forth a rash of condem-
ations, destructions, and sales of depreciable property that had
preciated substantially. To prevent virtual confiscation of such ap-

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[5] Treas. Reg. 45, art. 110 (1919).

[6] *See* Ribbon Cliff Fruit Co., 12 B.T.A. 13 (1928); Harry B. Hooper, 8 B.T.A. 397 (1927).

[7] H.R. Rep. No. 2333, 77th Cong., 2d Sess. 53-54 (1942). *See* Wells, *Legislative History Treatment of Capital Gains Under the Federal Income Tax, 1913-1948*, 2 Nat'l Tax J. 31-32 (1949).

preciation by high wartime rates, Congress conferred capital gain on depreciable property used in the trade or business but preserved full deduction of losses realized on this property.[8] While the House specifically excluded real estate from the preferred dual treatment the Senate added real estate and its improvements—largely to assure that losses on sales of plants and the like would be fully deductible.

Although the Commissioner of Internal Revenue sought on several occasions[10] to compel a contrary result, farmers considered their breeding animals to be property used in the trade or business and applied the new rules to their own benefit. The ensuing controversy was settled in favor of the taxpayers in *Albright v. United States*,[11] when the court found that all the culls[12] from a dairy herd were property used in the trade or business and that sales proceeds therefrom qualified for capital gain treatment.

Even with this victory, the livestock interests were concerned that administrative practice might not be so lenient as the cases and in 1950 urged the Senate to legislate on the subject. These efforts failed,[13] but a renewed fight in 1951 moved Congress to clear up any uncertainties by enacting the predecessor of the Internal Revenue Code of 1954 section 1231(b)(3) in the Revenue Act of 1951.[14] The explanation of the Act also made clear that the animals' basis for gain was to be determined under the taxpayers' method of accounting. That is, a cash basis taxpayer would have no basis for raised animals and the entire sales proceeds would be capital gain. A taxpayer who capitalized or inventoried costs would use this basis and have gain only to the extent proceeds exceeded his basis.

The adverse effects of this legislation were noted in a letter from

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8 Wells, *supra* note 7, at 32.

9 S. REP. No. 1631, 77th Cong., 2d Sess. 49-50 (1942).

10 I.T. 3666, 1944-1 CUM. BULL. 270. I.T. 3712, 1945-1 CUM. BULL. 176; Mim. 666 1951-2 CUM. BULL. 60; Special Ruling by the Commissioner of Internal Revenue, CC 1948 STAND. FED. TAX REP. ¶ 6091 (Aug. 4, 1947).

11 173 F.2d 339 (8th Cir. 1949).

12 In a livestock operation, there is an annual crop of young animals. Since few farme have either the capacity or the desire to increase their operation by the full amount of ea crop, some part of the livestock must be sold. Normally those animals least fitted for t operation are sold. The process of selecting the animals to be sold is referred to "culling," and the animals so selected are "culls."

13 H.R. REP. No. 3124, 81st Cong., 2d Sess. 28 (1950) makes clear that Senate Amen ment No. 82 was rejected largely because it was limited to cattle. It also expressed ho that the Treasury would administer the law in accordance with the *Albright* decision.

14 Revenue Act of 1951, § 324. The Act stated that livestock held more than 12 mont regardless of age and held for draft, breeding, or dairy purposes would be treated property used in the trade or business for the purpose of § 117(j) of the Internal Reven Code of 1939, now § 1231 of the Internal Revenue Code of 1954.

15 S. REP. No. 781, 82d Cong., 1st Sess. 41 (1951).

ecretary of the Treasury Snyder to the Chairman of the Senate inance Committee on June 27, 1952.[16] This is the first statement f the taxable income distortions that occur from permitting capital osts to be deducted while permitting proceeds to be treated as apital gain. As has often been the case, the mechanics of creating tax loss that offsets income otherwise taxable at ordinary rates were ccurately described, but the full tax consequences were not sharply elineated.

Again, recounting the legislative history of the capital gain aspects f the problem has a purpose beyond the historical. That purpose to lay to rest the notion that the provision had any design other an to limit the tax on sales proceeds. There is nothing to suggest e limited tax rate was to produce the effect described in the next ction of this paper. Furthermore, the farm industry wanted treatent equal[17] to that accorded other industries. The industry argued at the aged cow was the equivalent of machinery scrapped by the anufacturer. Both were claimed to be entitled to capital gains on le. There is nothing in this history to suggest that Congress was urposefully subsidizing, in a rather haphazard manner, certain segents of the farm industry. Congress intended only to give farmers lief generally granted others.

With this historical note we can turn to demonstration of the egative tax impact.

III. How the Principle Operates

The problems in the farm tax loss area are described in various ays. The Treasury may point to the offsetting of farm losses against her income or to the creating of tax profits when there are no ecoomic profits. Others write about "hobby farming."[18] These descripons are not satisfactory, and the scope of this paper is not so narrow.

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16 The letter pointed out that the deduction of livestock raising costs from ordinary come while allowing capital gains treatment for the sale of breeding livestock distorted come downward by $275,000,000 a year and gave a windfall to those farmers and ranchers en using cash basis accounting. Letter from Secretary of Treasury Snyder to the Chairan of the Senate Finance Committee, 98 Cong. Rec. 8307, 8308 (1952), also reported in CH 1952 Stand. Fed. Tax Rep. ¶ 6239 (June 27, 1952).

17 *See* notes 13, 14 & 15 *supra*.

18 *See* House Comm. on Ways and Means and Senate Comm. on Finance, Tax eform Studies and Proposals of the U.S. Treasury Department, 91st Cong., 1st Sess. 1, 154 (1969) [hereinafter cited as Treasury Studies]; House Comm. on Ways and eans, The President's 1963 Tax Message, 88th Cong., 1st Sess. 144-45 (1963) [hereinafter ed as 1963 Tax Message]; letter from Secretary Snyder, *supra* note 16. For a discussion "hobby farming" see Sweeney, *The Farm Loss Deduction*, 53 A.B.A.J. 447 (1967), d Dickinson, *The Farm Loss Deduction: A Reply*, 53 A.B.A.J. 1111 (1967).

Rather, this paper is concerned largely, but not solely, with the negative tax rate that may be applied to farm *profits*.

What is a negative tax rate? A positive income tax rate takes a par of a taxpayer's profits and puts them in the Treasury. A negativ tax rate, on the other hand, takes dollars from the Treasury and put them in the hands of citizens, just as a spending program does. I the analysis that follows, this latter process is shown to flow fron the conferring of capital gain treatment on the sales "proceeds" o assets, "proceeds" that are created by expenses, which may be full deducted when paid.

The negative tax effect may be fully demonstrated by the fol lowing five cases. In each case, the asset sold is assumed to have n basis because its costs have been fully deducted, and as a consequence the entire sales proceeds are given capital gain treatment. The case are:

Case No. 1. An economic loss is incurred.
Case No. 2. An economic breakeven is reached.
Case No. 3. An economic profit is realized, but the profit margin is less than 100 percent of cost.
Case No. 4. An economic profit is realized, and cost is 50 percent of the selling price.
Case No. 5. The same as Case No. 4 except cost is less than 50 percent of sales proceeds.

The economic and tax reporting of these cases would be as follows:

CHART A

	Economic Reporting			Tax Reporting		
	Sales Price	Cost	Economic Profit or (Loss)	Ordinary Loss[19]	Taxable[20] one-half of Capital Gain[21]	Profit or (Loss)
Case No. 1	80	100	(20)	100	40	(60)
Case No. 2	100	100	0	100	50	(50)
Case No. 3	120	100	20	100	60	(40)
Case No. 4	200	100	100	100	100	0
Case No. 5	250	100	150	100	125	25

[19] Reported on Schedule F, Internal Revenue Service Form 1040, and which woul offset other fully taxable income.

[20] This is the taxable portion of the capital gain, which is reached by reducing th entire gain by the deduction allowed by Internal Revenue Code of 1954, § 1202 so that th taxable portion is only 50% of the gain. This one-half of the gain is taxed either at th taxpayer's marginal tax rate or at a 50% rate, whichever is lower. In cases in which th 50% rate (resulting in a tax of 25% on the gain) is lower, the taxpayer pays the *alternati tax on capital gains*. This additional rate limitation on long term capital gain (in practic effect of benefit only to those taxpayers having sufficient income to be in a tax brack above 50%) would be removed by § 511 of H.R. 13270, 91st Cong., 1st Sess. (1969) (passe

In each case, the ordinary tax loss may be fully offset against er nonfarm income while only one-half of capital gain is subject tax. The result is that if the taxpayer has other income against ch the loss may be deducted, taxes on this other income will be uced by the amount of the loss multiplied by the taxpayer's rginal tax rate. The taxpayer will, however, incur a tax on the n that may never exceed more than 25 percent of the entire ital gain.

The consequences of this reporting may best be illustrated by rence to four taxpayers having the different marginal tax brackets percent, 30 percent, 50 percent, and 70 percent. The assumption of percent bracket is valid only if the taxpayer has no other taxable in- ne. Except in the case of the 0 percent taxpayer, the tax on the gain ess than the benefit of deducting the loss from other income. The benefit or payment from the Treasury to the taxpayer is the dif- nce in the value of the loss and the liability for the capital gain [22] Specifically, the size of the payment or reduction of other taxes r giving effect to the capital gains liability is in each case as ows:

CHART B

	Effective Tax Rate on Additional Income			
	0%	30%	50%	70%[23]
Case No. 1	0	18	30	50
Case No. 2	0	15	25	45
Case No. 3	0	12	20	40
Case No. 4	0	0	0	20
Case No. 5	[24]	(7.50)	(12.50)	7.50

ne House and referred to the Senate Finance Committee on August 7, 1969). Con- ons herein, which assume the alternative tax computation, must be considered in of this possible change in the law. The Treasury Department has announced opposi- to the elimination of the alternative tax. *See Hearings on Tax Reform Act of 1969 e the Senate Comm. on Finance*, 91st Cong., 1st Sess. 6 (interim manuscript) (State- of David M. Kennedy on Sept. 4, 1969).

The foregoing analysis applies to individuals only. Corporations receive substantially ame benefit under a slightly different statutory framework. Section 461 of H.R. would raise the corporate alternative tax rate to 30%. While the farm loss problem gely related to individuals, the rate of corporate expansion into farming in the last al years has grown. *See Hearings Before the Subcomm. on Monopoly of the Select n. on Small Business*, 90th Cong., 2d Sess. 2 (1968). *See also* Thomas, *Corporate usters*, Barron's, Aug. 5, 1968, at 3, col. 1; Thomas, *Lure of the Land*, Barron's, 19, 1968, at 3, col. 1.

[1] Reported on Schedule D, Internal Revenue Service Form 1040, as a sale of a capital

[2] This usually will be the taxpayer's effective tax rate multiplied by the difference en the loss and the taxable one-half of capital gains. When the taxpayer uses the ative tax on capital gains, the benefit is greater.

[3] These results are proportionately greater because the tax rate on the taxable one- of capital gains is limited to 50%, while the loss is fully deductible against ordinary e taxed at more than the 50% rate. Also note that the top tax rate of 70% would duced to 65% by H.R. 13270, 91st Cong., 1st Sess. (1969).

[4] The parentheses indicate that a positive tax is paid by the taxpayer. For the 0%

Chart B is the net tax benefit to each taxpayer. This amou should be added to the economic net return to ascertain the ov all dollar gain for each taxpayer. When this is done, the total aft tax dollar profit in each case to taxpayers in various tax brack would be:

CHART C

	0%	30%	50%	70%
Case No. 1	(20)	(2)	10	30
Case No. 2	0	15	25	45
Case No. 3	20	32	40	60
Case No. 4	100	100	100	120
Case No. 5	150[25]	142.50	137.50	157.50

These charts permit a number of observations.

(1) There is no taxable income until the economic profit is least as much as the cost, (See Chart A, Case No. 4). Any profit beyo that is taxed at no more than the applicable capital gain rate (Chart B, Case No. 5, 50 percent taxpayer).

(2) If there is no other income, the tax rate is never less th zero; in other words, the taxpayer receives no refund or abatem of taxes on other income (See Chart B, 0 percent taxpayer colum

(3) If there is other taxable income,[26] the interplay of ordin deductions and capital gain produces a negative tax rate until the pr is as great as cost (See Chart B, Cases No. 1, 2, and 3, 30 percent 50 percent taxpayers).

(4) The taxpayer who pays the alternative tax on capital ga continues to receive a negative tax benefit even though profit exce cost. This negative tax benefit does not disappear until the ratio sales price to cost exceeds the ratio of the marginal ordinary inco tax rate to the capital gain rate (See Chart B, Cases No. 4 and 5, percent taxpayer).

(5) To a taxpayer without other income, his tax rate is the sa regardless of profit margins until his sales price is twice his cost (Chart B, Case No. 5, for 0 percent taxpayer).

While the foregoing appears generous in the extreme, one o

taxpayer, the taxable income would be taxed at the lowest rate if the income was eliminated by itemized deductions and personal exemptions. For the 30% and taxpayer, the profit for tax purposes is subjected to capital gain rates. The 70% taxp continues to show a net payment from the Treasury.

25 Since no amount of tax for this taxpayer is shown in Chart B, the total econ profit has not been reduced by any tax. The tax would be $25 multiplied by the effe tax rate.

26 The income might be realized in another year because the loss may become operating loss deduction in another year.

tential benefit has not been mentioned. It arises when the costs incurred and deducted in years before the sales proceeds are real-d. For example, in Case No. 3, the 50 percent taxpayer who ducts the $100 of costs in the first year reduces his taxes on other ome by $50. If the income is not realized until later years, this is an interest-free loan from the federal government to the tax-ver, which is wholly or partially repaid when the income is real-d and subjected to tax. This benefit exists apart from any ferential in tax rates. Even if the sales proceeds are fully taxed ordinary income in a later year, the taxpayer has had a substantial nefit from the premature deduction of capital costs.

This note on deferral completes the analysis, and for the pur-es of this discussion, we can now specify that the progeny of ly deductible costs and capital gain income are three in number. st, is the opportunity to defer taxes on other income by deducting ts before realization of the income produced by them. This is *deferral* benefit. Second, in some circumstances, an economic pro-bears no tax at all. This occurs when the sales proceeds, fully re-ted as capital gain, are not more than twice the amount of the lucted costs. This is the *exemption* benefit. Third, in some cases tax saving resulting from the deduction of the costs is greater n the tax paid on the sales proceeds at capital gain rates. This urs in all cases in which (1) there is other income, noncapital n income, to absorb the deducted costs, and (2) the ratio of the s proceeds (taxed only at capital gain rates) to the costs does not eed the ratio of the marginal ordinary income tax rate to the ital gain tax rate. This is the majority of cases. The difference ween the tax saving produced by the deduction and the tax paid the sales proceeds is, in effect, a *payment from the Treasury* to taxpayer. This payment varies in proportion to the taxpayer's rate. It is thus a kind of a *negative income tax*. It can be argued t the negative income tax is just an extension of the exemption nefit. That is, the deducted costs exempt not only the income pro-ced by them but other income as well. While there is some merit his argument, the division between the exemption benefit and the ative income tax will become more meaningful in the discussion pending legislative proposals.

It seems appropriate now to narrow the area of our discussion considering the cases in which the opportunity to realize these nefits arises.

IV. The Greenest Pastures

While there are other avenues of abuse[27] in the farm field, t investment literature suggests that the potential for artificial farm t

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27 There are basically six areas in which the farm loss problem may arise. In addit to those discussed in the text, they are:

(a) The do-it-yourself averager, who shifts income and expense from year to y through the use of cash accounting. For example, a taxpayer, who desires to reduce ta in a particular year, might purchase a large amount of supplies that would not consumed until the following year. The deduction would be claimed in the year purchase, and no adjustment would be made for the goods on hand at year's e Similarly, a taxpayer might sell products and defer payments until the following y The income would be reported by a cash basis taxpayer only in the following year. T extent of the premature deductions, which may be taken, is not clear. Recent cases indi that the taxpayer faces increasing judicial resistance to this tax limiting approach. cases concerning supplies see Lillie v. Commissioner, 370 F.2d 560 (9th Cir. 1967), *aff'g curiam*, 45 T.C. 54 (1966); Shippey v. United States, 308 F.2d 743 (8th Cir. 1962); Cra v. Commissioner, 272 F.2d 895 (10th Cir. 1959); Harry W. Williamson, 37 T.C. 910 (19 John Ernest, 32 T.C. 181 (1959), *acquiesced in*, 1959-2 Cum. Bull. 4. *See also* Paule United States, 63-1 U.S. Tax Cas. ¶ 9280 (S.D. Cal. 1963); Rev. Rul. 170, 1953-2 Cum. B 141 (intangible drilling expenses); Rev. Rul. 58-53, 1958-1 Cum. Bull. 152 (personal serv under § 212). Prepaid alimony is not deductible. George R. Joslyn, 23 T.C. 126 (19 *rev'd and rem'd in part and aff'd in part on other grounds*, 230 F.2d 871 (7th Cir. 19 Nor are prepaid medical expenses deductible. Robert S. Bassett, 26 T.C. 619 (19 Deduction of prepaid interest, long considered a somewhat special case, is also subject to severe limitations. *See* Rev. Rul. 68-643, 1968-2 Cum. Bull. 76. While Lil Bacon Glasswell, 12 T.C. 232 (1949), *acquiesced in*, 1949-2 Cum. Bull. 2, and Estat Aaron Lowenstein, 12 T.C. 694 (1949), *acquiesced in*, 1949-2 Cum. Bull. 2, permit de tion of taxes on current income even though paid prior to the time the taxes became these cases clearly rely on a lack of distortion in income. Indeed, they represent case which income is perfectly matched against the taxes imposed upon it. This liberalit timing income and expenses seriously weakens § 270 as well.

(b) The hobby farmers, who are engaged in activity which they refer to as farm but for whom the profit motive is not the inducing factor. This presents the questio subjective intent, which is usually litigated by the Internal Revenue Service. For excel summaries of the hobby loss cases see 18 Section of Taxation, ABA, Annual Rep No. 4, at 275 (1965); 19, No. 4, at 149 (1966); 20, No. 4, at 143 (1967); 21, No. 4, at (1968). This problem is not one unique to the field of agriculture, and legislation desig specifically for it should not be confined to agriculture. Any solution to the o farming problems should be applicable equally to hobby farming. Thus solutions of farming problem need not be tailored to deal with the hobby problem.

(c) The statutory provisions, which allow farmers to deduct expense which all w concede to be capital. These are § 175 (soil and water conservation expenditures), § (expenditures for fertilizer), and § 182 (expenditures for land clearing). The last sec is limited to 25% of *taxable income*. Section 175 is limited to 25% of *gross income* farming with an unlimited carryover. The charge is often made that § 175 permits purchase of rundown farm land, which produces gross income but little or no net inc and the rebuilding of it by deductible expenditures. In many cases, the land is then all to be held for subdivision and not for farming purposes. This aspect is merely anc facet of deducting capital expenditures and perhaps should not be placed in a sepa category. It, however, is not as widespread as the problems discussed in text an relegated to a footnote to concentrate the text on the two major aspects of the problem.

(d) The abuser of accelerated depreciation, who purchases animals at a very high p claims accelerated depreciation on them, and sells well before the end of the deprec life is reached. Since the animals will be treated as breeding animals and since there recapture of depreciation on livestock, the gain may be reported as capital gain. Sol this abuse would seem to be largely a matter of enforcing the present law. Deprecia below a realistic salvage value is not permitted. Salvage value must be establishe reference to the expected useful life of animals to the taxpayer. This would seem t an avenue unsuccessfully traveled by Hertz Corporation v. Commissioner, 364 U.S. (1960). *See* Massey Motors, Inc. v. United States, 364 U.S. 92 (1960). This problem is

ses arises largely in two areas: (1) the growing of trees, vines, and er plants having a relatively long life and producing annual crops, d (2) the raising of livestock. The purpose in both cases is the luction of capital costs followed by sale at capital gain rates. There differences in the two operations, but in each, the virtual impos- ility of turning a tax profit is the same.

Development Costs of Plants

A number of crops, principally fruit and nuts, are produced by es or vines only after a substantial development period.[28] The cost planting them must be capitalized. Under the Treasury's regula- ns,[29] however, all of the costs thereafter incurred prior to the time t the plant is a commercial producer may be deducted currently. ce the planting costs are relatively insignificant,[30] the major portion all costs incurred in the preoperation stage may be deducted and y create losses, which can offset ordinary income from other en- vors. When the commercial bearing state is reached, a wise tax- er may sell out, and his gain will ordinarily be treated as capital n because the property will be considered as property used in the de or business. It should be noted that this results from the general guage of Code section 1231(b)(1) and not from the special pro- ion added for livestock in 1951.

For example, a taxpayer may purchase ten acres of land and nt it with orange trees. The cost of the land and planting may assumed to be $12,000. The orange trees will not bear fruit until seventh year, but during the development period, annual costs perhaps $1,500 may be incurred for irrigation, cultivation, pruning, aying, and other care of the trees. By the end of the sixth year, taxpayer will have incurred "cultural practices expenditures"[31] $9,000. These expenditures may be currently deducted against er income. To a taxpayer in the 70 percent bracket, the deductions

her facet of deducting capital expenditures. The difference is that the excessive de- ion may be spread over a number of years rather than solely in the year when rred. Again, this problem is also relegated to this footnote to avoid digression from two major areas of abuse.

[28] These crops include citrus, peaches, apricots, cherries, grapes, and nuts. There are oubtedly others. The foregoing, however, indicates the widespread nature of the area hich these costs are incurred.

[29] Treas. Reg. § 1.162-12 (1961).

[30] In Robert L. Maple, 27 CCH Tax Ct. Mem. 943 (1968), the cost of raising orange s to a stage when they could be planted in the grove was $2.75 per tree. Of this unt only $.42 was required to be capitalized. After planting in the grove, the trees take from four to eight years to bear commercial quantities of fruit. Costs during period are also deductible.

[31] For use of this terminology see Estate of Richard R. Wilbur, 43 T.C. 322 (1965).

over the years will have reduced his taxes on other income by $6,30 If the grove is sold early in the seventh year at an economic pro of 10 percent, the taxpayer will realize $23,100. His basis, howev will be only $12,000, and he must pay a capital gains tax on t difference between his basis and the sales price, amounting to $2,775

The net economic profit is $2,100 [$23,100 sales price, less $21,0 of costs ($12,000 land and planting costs, plus $9,000 cultural practi expenditures)]. But the taxpayer also realizes an additional *tax pro* The tax benefit from deduction of cultural practices expenditu was $6,300, and the tax cost of the sale was $2,775. The taxpay thus has a *tax profit* (money paid to him by the Treasury's reduci taxes on other income) of $3,525. There is an overall profit of $5,6 consisting of an economic profit of $2,100 and a *tax profit* or subsi of $3,525.

B. *Livestock*

Livestock also presents an opportunity to realize substantial t profits from an economically profitable operation. Raising costs a qualify for current deduction.[33] If, however, the livestock are breedi

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[32] In the year of sale, the taxpayer will report:

Proceeds of sale of § 1231 assets	$23,100
Basis	12,000
Gain	$11,100
Tax at 25% rate	$ 2,775

[33] Treas. Reg. § 1.162-12 (1961) permits farmers to deduct livestock raising costs makes no reference to the taxpayer's method of accounting. Certainly the option to ded these expenses is available to the cash basis taxpayer. As to accrual basis taxpayers must use inventories, the answer is not so clear. The option is not available to a taxpa who uses the unit livestock method because he must include raised livestock in inventory even though held for draft, breeding, or dairy purposes. *See* Treas. R § 1.471-6(f) (1964). This requirement was upheld in United States v. Catto, 348 U.S. (1966). Taxpayers using other methods of inventory valuation are not required to incl raised animals in inventory. This has led at least one author to argue that the optio expense raising costs is available to these taxpayers. *See* Hawkinson, *Farm Expenses General Accounting*, 22 TAX L. REV. 237, 257 (1967). He adds that *United States v. C* throws doubt on this conclusion. Since *Catto* merely upheld longstanding regulations seems doubtful that it would support a requirement that all taxpayers, even though specifically mentioned in the regulations, must inventory the cost of raising draft, bre ing, and dairy animals. Thus it is likely that only the taxpayer using the unit livest method must inventory these costs, and if they are inventoried, they are deducted un capitalized. Whether these costs must be capitalized, if not inventoried, by the acc basis taxpayer is not clear. Treas. Reg. § 1.61-4 (1963), dealing generally with reporting cash and accrual basis farmers, might be argued to require capitalization of these costs accrual basis farmers. Treas. Reg. § 1.61-4(b) (1963), applicable only to accrual b farmers, states that draft, breeding, or dairy livestock "may be included in inventory instead of being treated as capital assets subject to depreciation." This language imply that livestock raising costs must be capitalized if not inventoried. The Inte Revenue Service seems never to have so construed this provision. Thus it seems likely, not clear, that an accrual taxpayer using some method other than the unit livest method may choose to deduct livestock raising costs, to include the costs in inventory, to capitalize such costs. Presumably, once the farmer makes a choice, he must conti with that method.

t, or dairy animals, they qualify for capital gain treatment if held more than twelve months.[34]

Since "culls" from a breeding herd are characterized as breeding nals, they are also entitled to capital gain.[35] A large part of the n product may fall into this category with the result that a very ificant portion of the total receipts from the operation is reported apital gain.

While many animals are classified as livestock,[36] cattle appear offer the widest avenue to escape taxes. For example, a taxpayer have a herd of ten cows. They have produced ten calves (average ld be about eight and one-half or nine) for several years, one-half of ch are bull calves. The cost of keeping an animal for a one-year od is $100, so that expenses for the ten cows are $1,000. The bull calves are sold soon after birth for $40 each, and the proceeds reported as ordinary income. The five heifers are retained for eding purposes. The herd will therefore increase unless five of cows are sold. If the taxpayer has been in business several years, nay have old cows or he may have young heifers of the prior years. either event, he can cull five animals from his breeding herd and them at capital gain rates. Assume that the culls sell for a total 900. Thus the economic profit for the year is $100, a 10 percent it margin. If this is all that occurs and if we ignore the alternative the taxpayer will report the following:

Proceeds from culls (reported as capital gain)	$ 900
Less § 1202 deduction (capital gains)	450
	450
Add proceeds from bull calves	200
Total adjusted gross farm income	$ 650
Farm expenses	1,000
Farm tax loss	$ 350

Since there is a crop each year, the same pattern may be repeated after year.[37] In a properly operated breeding operation, a tax profit

[4] INT. REV. CODE of 1954, § 1231(b)(3). Race horses qualify under the more general age of section 1231(b)(1) and need only be held more than six months.

[5] The case law dealing with culls is extensive. *See* McDonald v. Commissioner, 214 341 (2d Cir. 1954), *on remand*, 23 T.C. 1091 (1955), *acquiesced in*, 1956-1 CUM. BULL. 4. *lso* C.A. Smith's Estate, 23 T.C. 690 (1955), *acquiesced in*, 1956-1 CUM. BULL. 5.

[6] Included as livestock are sheep, goats, dogs, foxes, minks, and other exotic little ires such as chinchillas, Treas. Reg. § 1.1231-2(a) (1965). *See* William W. Greer, 17 965 (1951), *acquiesced in*, 1951-1 CUM. BULL. 4. *See also*, U.S. TREASURY DEPARTMENT, ER'S TAX GUIDE 24 (ed. 1969).

[7] An excellent illustration of the artificial losses and their effect on taxes on income other sources may be found in a letter from the National Livestock Tax Committee airman Wilbur Mills of the House Ways and Means Committee, Mar. 28, 1969, for

will never be reported. In addition, a taxpayer in the 50 perc bracket who has dividend income to absorb this $350 loss will relieved of $175 in taxes on the dividend income. It is this benefit t is his negative income tax.

In these selected areas of agriculture, the problem of the "fa loss" is confronted in its most extreme. Quite clearly, the problem neither one of hobby losses nor of the gentleman farmer, both of wh have received extensive treatment. The problem is not so subtle. Rat it is one of combining the deduction of capital costs with capital g on sale. Even though the activity produces an economic profit, th is almost no prospect that it will produce a profit for tax purpo because a profit is not reported for tax purposes until the econo profit is as great as cost. The results are (a) a deferral of taxes, (b) exemption of profits from tax, and (c) a negative income tax.

These results are irrational in a system designed to impose a on profits. Congress is not likely to have intended them. But neit the irrationality nor the lack of design assure its removal, a matte which we now turn.

V. The Ideal Solution—Accrual Accounting and Full Cost Capitalization

The farm loss problem has received much attention in recent ye and a number of solutions have been proposed.[38] In this author's v

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inclusion in the hearings record of the recent tax reform hearings before the Comm House Comm. on Ways and Means, Tax Reform, 1969, 91st Cong., 1st Sess. 2056, 20 (1969) [hereinafter cited as Tax Reform 1969]. *See also* Pitcairn & Chandler, *Tax Ad tages of Cattle Operations*, 1 P-H Tax Ideas ¶ 17,013, (1968).

[38] In addition to solutions discussed in text see, *e.g.*, Sweeney, *The Farm Loss De tion*, 53 A.B.A.J. 447 (1967), which advocated amending § 165 to disallow a farm loss u there was a reasonable expectation of profit, and five consecutive loss years would been considered as proof that the expectation was not reasonable in absence of clear convincing evidence. This solution is technically deficient since there is no statutory d tion of a farm "loss," and the "loss" arises usually because § 162 deductions (not § exceed ordinary income. It is premised also on the belief that the farm loss problem be one of "hobby losses." The suggestion is properly rejected in a reply article. Dicki *The Farm Loss Deduction: A Reply*, 53 A.B.A.J. 1111 (1967). *See also* Hjorth, *C Congress and the Code—The Dangers of Tax Incentives*, 1968 Wis. L. Rev. 644, 67 which the author proposes a § 1245 recapture and denial of § 1231 treatment in ab of a failure to capitalize growing costs. This is a good proposal but does not reach groves, although it could be so broadened. It, however, does raise the accounting prob discussed in text. *See also* Tax Reform 1969, at 2056 (letter from the National Live Tax Committee), which suggests a § 1245 recapture and lengthening of lives for an to qualify under § 1231. As is demonstrated in attachments to this letter suggesting approach, considerable tax subsidy remains. Thus this proposal must be adjudged la ineffective.

See also S. 1560, 91st Cong., 1st Sess. (1969), introduced by Senator Miller. This would limit farm deductions of nonfarmers to farm income except in the case individual whose principal residence is on a farm. In such case, the limit on farm d

ıly three present even feasible approaches. One goes directly to the roblem and recommends accrual accounting and full cost capitaliza-on. It may be the ideal solution. The other two appear to have as ıeir purpose an elimination or reduction of the negative tax on total rm profits while not entirely doing away with cash accounting or pital gain, at least for "real" farmers.

The accrual accounting and full cost capitalization suggestion has uch appeal and has been discussed at length,[39] but a few further words ay be in order here. Its rationale is that the farm problem arises om the overly simplified accounting rules, and the solution would be ıtright revocation of the authority for farmers to deduct raising and evelopment costs. In the primary areas of abuse, this solution would quire that livestock raising costs either be "inventoried" or "capital-ed" (interchangeable terms for our purposes). For growing plants, e dispensation to expense cultural practices expenditures would be voked. They would be capitalized, as apparently would have been quired if the matter had been left to case law.[40] While this suggestion pears to be the proper tax treatment, there are at least two barriers its adoption. The first is a practical one; the other is a political one. hile the first undoubtedly could be reduced to nonobjectionable vels, there is great doubt that the second can be overcome.

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ns would be the total of (a) farm income, (b) wages and salaries, (c) timber income, and royalties derived from property. A farmer would be entitled to claim all his deductions. 'armer is defined as a taxpayer whose net income from farming for the three preceding rs equals two-thirds of the total net income for these years. For this purpose net farm ome includes the full amount of gain on the sale or exchange of assets. Total income, vever, excludes all those gains except those incurred on farm assets. Certain deductions not disallowed even though attributable to the farm. They are deductions arising m (a) general casualty and weather conditions, (b) experimental farming, and (c) egg broiler operations. Also, farms (a) acquired from decedents, (b) acquired by foreclosure, (c) operated by an estate are excepted for limited periods. Provisions are made to solidate sole proprietorships with partnerships and Subchapter S farm income and es.

S. 1560 has many weaknesses. First, it raises difficult definitional problems. What is a ncipal residence? What is a farm on which the principal residence must be located? is differs radically from the problem of defining farm income and expense—a feature mon to many proposals. Second, a farmer may continue to offset nonfarm income, *e.g.*, ges, by farm losses. Additionally, a nonfarmer may do so if he lives on a farm. There uld appear to be no policy supporting this exception. Third, the sponsor concedes the inition of "net farm income" and "total income" are designed to prevent, at least to ıe extent, application of the Bill to livestock—probably the worst abuse. Fourth, the inition of a farmer depends on a new concept of farm income that is not the same as t set out for filing of a declaration of estimate tax. Thus a new category of farmers uld be created. Fifth, this approach is not directed toward either of the causes of the blem, *i.e.* capital gain and simplified accounting rules. Its effect would thus be difficult predict.

As to some other approaches, some redefinition of assets qualifying for § 1231 might be attempted. This does not appear fruitful so long as their costs can be fully deducted.

39 *See* Hawkinson, *supra* note 33.

40 *See* cases cited note 6 *supra*.

Although the greatest abuses of the present scheme rarely arise in very diversified operations, the farmer engaged in multiple farming endeavors is always cited to illustrate the practical problem. For example, a farmer may be engaged in growing grain crops and livestock. Some of the grain may be fed to his livestock and some may be sold. Labor will be divided between these activities, and accurate separation of labor and other costs as between the various operations may be difficult. The allocation of costs between products on hand and products sold raises another accounting problem. These allocation problems suggest that a shortcut method of tracing costs must be devised if farming operations are not required to adopt cost accounting procedures,[41] which are sometimes claimed to be too sophisticated for the so-called family farm.

While inventories using some simplified valuation technique may fill the gap left by cost accounting,[42] their use is not a path without some obstacles. First, the products must be counted, and then they must be valued. Each process presents some problem.

Counting of the product on hand must occur at the end of the year. Since most tax years end on December 31, a livestock raiser might be forced into winter's blizzards to obtain a count of cattle. Substantial numbers of calves may also be in gestation at that time. These and other special problems might be overcome by delaying inventory until roundup time, assuming this time was approximately the same each year, but administration of this lenience could impose a burden on the Commissioner, who would have to decide in each case whether the special dispensation would be available. Another alternative might be the use of a fiscal year that would end at a time when the difficulties mentioned would be least present.

While these practices would permit the counting of animals, the measurement of grain crops and other feed such as hay might not be susceptible of more than a fair estimate without expensive measuring

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41 Full cost accounting is used by some farmers for financial reporting purposes even though not for tax purposes. Lenders may also require that financial statements be prepared on at least a modified accrual basis. Thus techniques are available and in use. If, as suggested later in the text, more simplified inventory methods are developed, one might question whether they should be available to taxpayers who now employ better procedures for nontax purposes while reporting taxable income on the special farm accounting rules. Yet denial of these simplified methods could create a competitive edge that does not now exist.

42 Under Treas. Reg. § 1.471-8 (1958), taxpayers engaged in selling at retail may establish an inventory by reducing selling prices in accordance with an established formula to reach approximate costs. While agricultural products normally would not have standard markups, a similar procedure might be used by reducing market value by a reasonable profit margin.

nd movement while in storage. Assuming that this burden would not e imposed, a reasonably accurate estimate is better than no count at ll.

Although these and other techniques structured to ease the count- ng problems would grant a taxpayer some latitude and perhaps stretch is conscience, they seem to offer permissible, reasonable approxima- ons, and they would reduce the counting problem to manageable roportions. They also appear likely to reflect income more accurately nan the present accounting rules do.

Once the product is counted, its valuation remains, and the in- entory method must be selected. At present, four methods are au- norized: (a) cost; (b) lower of cost or market; (c) the farm price ethod; and (d) for livestock, the unit livestock method. Each has at ast one feature suggesting either that the method is not feasible or at the method must be modified.

The use of cost suffers from the allocation difficulties just men- oned—the accounting art perhaps has not been sufficiently perfected permit its use without excessive cost. Rejection of cost also leads to rejection of cost or market, whichever is lower. If cost cannot feasibly ascertained, certainly no determination of whether cost or market lue is lower can be made. The alternative might be the use of mar- et value. This method has never been acceptable, but its use might considered. The major criticism of it would be the recognition of otential profit before realization by sale in those cases in which mar- et exceeds cost.[43]

The farm price method is similar to market valuation. It values e product at current selling prices but permits the estimated direct st of disposition to be deducted from the value. This method also ffers from the criticism that it would force a recognition of profit fore realization.

We come then to the unit livestock method, which is, of course, t applicable to grain crops. It requires a classification of livestock age and kind with a standard valuation, based on approximate costs nen the inventory was first established, being given each unit. This it value may not, however, be changed from year to year.[44] Thus has some of the characteristics of the LIFO method but is more osely aligned to the base price method, a wholly impermissible

[43] One might also consider the constitutional implications of forcing recognition of ofit before there is a realization. *See, e.g.*, Eisner v. Macomber, 252 U.S. 189 (1920).
[44] Treas. Reg. § 1.471-6(f) (1958).

method of accounting.[45] It fails to recognize price increases and thus permits a premature deduction of costs when costs are rising.[46]

While the use of inventories does offer a means of estimating costs, each of the methods now in use carries with it at least one in firmity, which suggests that new methods or adaptation of old ones should be considered when applied to farming. Ideally, a method akin to the present retail price method might solve most of the problems by permitting valuation at current market less a reasonable profit mar gin, so as to prevent the premature recognition of income that now occurs under the farm price method.

But even adaptation of inventory methods would not prevent a number of transitional problems. Costs written off in earlier years might become a part of the opening inventory and become an adjust ment for the purposes of section 481, which prescribes rules for han dling accounting problems arising out of a change of method. In some cases these adjustments would convert what is capital gain when sold under present law to ordinary income when placed in opening inven tory in the year of change. While other problems could also arise, the should soon disappear as all existing operations shifted to proper ac counting and as new enterprises commenced business using proper methods. The practical problems thus could be overcome.

This brings us to the political problem. While there may be con siderable sentiment in Congress to deal with the farm problem,[47] it does not seem to be premised on the belief that the cash method should be eliminated for farmers. Indeed, the very foundation of the present bills is to preserve the cash method for "farmers" while deal ing with the abuses arising from its use by nonfarmers. This political problem appears insuperable at the moment.

In concluding this discussion, the denial of cash accounting and full capitalization of costs would eliminate a large part of the farm loss problem, *i.e.*, the deferral of taxes resulting from premature dedu tion, the complete exemption of farm profits from tax, and the nega tive income tax. While arguably ideal,[48] this solution does raise the

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45 Treas. Reg. § 1.471-2(f)(4) (1958). "LIFO" is a shorthand designation for the Last In-First-Out method of inventory valuation.

46 Senator Jack Miller of Iowa realizes that unit livestock valuations are unrealistic and would not close off the farm loss problem in the livestock area. TAX REFORM 1969 at 2001, 2003 (statement of Senator Miller).

47 *See* S. 1560, 91st Cong., 1st Sess. (1969); S. 500, 91st Cong., 1st Sess. (1969); H.R. 5250, 91st Cong., 1st Sess. (1969); H.R. 4257, 91st Cong., 1st Sess. (1969).

48 Even ideal solutions may not entirely handle the problem. Under a system requiring that all costs be capitalized, there would remain a problem of reporting gain on some assets as capital gain, even though the assets are held for sale to customers in the ordina

reviously discussed technical and practical problems. The problems re not sufficiently grave as to cast doubt on the correctness of this approach. Their superficial complexity lends support to the conclusion hat whatever the Congressional mood, it is not to prescribe theoretically correct accounting rules applicable for all farmers. We turn, herefore, to other solutions.

VI. Other Solutions

Since elimination of the farmer's cash accounting may engender olitical opposition from quarters now espousing some change in the arm tax rules, those desiring improvement must move on to consider ther approaches. Two are now pending before Congress. One is a odified version of the excess deductions account proposed by President Kennedy in 1963.[49] The other is now embodied in a bill authored y Senator Metcalf of Montana.[50] The excess deductions account may e described as a recapture proposal[51] while Senator Metcalf's Bill is disallowance proposal.

1. *Recapture*

This discussion begins with the Treasury's proposals to Congress n April 21, 1969.[52] It consisted of an excess deductions account re-

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urse of business. For example, breeding livestock produce a crop each year. Some part the crop may be retained for breeding purposes, and some part, usually the vast majority it, will be sold in the ordinary course of business. At the birth of the animal, a taxpayer es not know into which category particular animals fall, and the purpose for which they e held is ambiguous. This ambiguity is resolved under present law by requiring that each imal be held at least twelve months for long-term capital gain treatment to be allowed. hat period is unsatisfactory because the ambiguity of purpose is generally not resolved ring the twelve months. Similarly, questions could arise concerning the cost of maining female animals during the period of gestation. These costs would seem to be pital costs of the young animals. But if the mother also had some other utility such as e as a dairy cow, the taxpayers would likely argue that the costs were deductible as costs producing milk.

[49] 1963 Tax Message 144. The newer version was presented in Tax Reform 1969, at 47 (the President's 1969 Tax Message).

[50] S. 500, 91st Cong., 1st Sess. (1969). Its genesis was S. 2613, 90th Cong., 1st Sess. 967). The 1967 Bill was revised in accordance with a Treasury report on S. 2613, 114 ong. Rec. 8782 (daily ed. July 17, 1968), and reintroduced, S. 4059, 90th Cong., 2d Sess. 968). It was further revised before introduction in 1969.

[51] The theory undoubtedly is the same as that embodied in two other statutory captures, § 1245 and § 1250. There have been excessive deductions against ordinary inme. When income is realized, it should be treated as the excessive deductions and taxed ordinary income rates. This notion of merging two transactions is familiar to the case w. *Compare* Arrowsmith v. Commissioner, 344 U.S. 6 (1952), *with* William L. Mitchell, T.C. No. 21 (Apr. 30, 1969). *See also* United States v. Skelly Oil Co., 394 U.S. 678 (1969).

[52] The House Committee on Ways and Means tentatively adopted the excess deducons account in roughly the form described in text. *See* House Comm. on Ways and eans, Press Release Announcing Tentative Decision on Tax Reform Subjects by hairman Mills (May 27, 1969). Changes from the Treasury's proposals are for present rposes unimportant. The House also incorporated a version of it in H.R. 13270, 91st

ferred to as an EDA. In the case of corporations, any excess of ordinary farm deductions over ordinary farm income would be required to be entered into the EDA. All other taxpayers would add this excess only to the extent that it exceeded $5,000. The amount in the EDA is reduced in any subsequent year[53] by any net farm income in the subsequent year. The $5,000 floor has the purpose of exempting the small "legitimate" farmer from the operation of the EDA.[54] Apparently, it is not granted for a corporation in order to preclude a taxpayer separating his farming operation into several Subchapter S corporations and securing the benefit of several floors on the EDA.

Gain on the disposition of farm property that may now be reported as capital gain would be reported as ordinary income to the extent of any amount in the EDA, computed at the year's end after giving effect to operations for the year.[55] The amount in the account would be reduced by the amount of capital gain converted to ordinary income. Increases in land values would be exempted from this conversion of capital gain to ordinary income except to the extent there had been prior deduction of clear capital expenditures such as soil and water conservation expenses, fertilizer costs, and land clearing costs under sections 175, 180, and 182, with respect to the parcel sold. No amount of farm loss is disallowed, and a taxpayer using a full cost absorption inventory method of accounting and capitalizing capital expenditures would not be required to keep the EDA.[56]

Cong., 1st Sess. (1969). The Treasury Department presented yet a third model when Assistant Secretary Cohen testified before the Senate Finance Committee on September 4, 1969. *See Hearings on Tax Reform Act of 1969 Before the Senate Comm. on Finance*, 91st Cong., 1st Sess. 39-42 (interim manuscript) (statement of Edwin S. Cohen on Sept. 4, 1969). This House version is discussed later in the text. There were also other parts to the Treasury farm proposals including a § 1245 recapture of excessive depreciation on livestock, an extension of lives for draft, breeding, and dairy animals and race horses to qualify under § 1231(b) and vast and complex changes to § 270. These appear mainly to have been designed to sew up the loose edges left after application of the excess deduction account. The need for these other provisions is discussed along with the proposals. TAX REFORM 1969, at 5414.

53 One difficulty with this approach arises when considerable farm income is realized before there is a loss. If the income followed the loss, it would reduce the amount in the EDA but apparently not if it precedes the loss, unless there is to be a negative EDA. As a result, timing of income will have a substantial impact.

54 TAX REFORM 1969, at 5495 (statement of Edwin S. Cohen, Assistant Secretary of the Treasury for Tax Policy).

55 TAX REFORM 1969, at 5178. As discussed later in the text, the gain mentioned by the Treasury's Technical Explanation probably includes the excess of fair market value over basis if the disposition is one that is not taxable under present law. If not, there is substantial room for avoidance by transferring § 1231 property to a related taxpayer who would have no EDA. As finally adopted by the House in H.R. 13270, 91st Cong., 1st Sess. (1969), the rules for transfers are complex. They do not close the possibility of tax avoidance through transfers but may represent a reasonable approach to a difficult problem inherent in the recapture concept.

56 Under the tentative decision of the Committee on Ways and Means, gain o

As already noted, the current proposal is similar to one proposed ı 1963, but there are several differences. Under the 1963 EDA, addi-ions to the account would be made only in years in which the tax-ayer's nonfarm income exceeded $15,000. The purpose of this feature ppears to be the same as the $5,000 floor in the current proposal. 'he 1963 proposal, however, focused more sharply on the use of farm osses to reduce taxes on nonfarm income. The 1963 proposal defined farmer as one not having nonfarm income in excess of $15,000. The resent proposal defines the farmer as one not having losses greater ıan $5,000. Both concede the propriety of deducting livestock losses gainst other farm income such as grain crops without penalty.

The 1963 recommendation also excluded certain expenses in com-uting the excess of income over deductions. These excluded expenses ere taxes and interest and losses and expenses from casualties and rought. It did not, however, contain an exception for gains due to ıcreases in land values.

The theory underlying the excess deductions account must be ıat the economic reality of the farm tax loss may not be determined hen the loss is incurred. Since it may be an economic loss, it should e fully allowable against other income. The loss, however, arises in ı industry in which the accounting rules and definition of capital sets are so loose that later capital gain must be presumed to have een created by the loss. Since the loss was an ordinary income deduc-on, the gain must be treated as ordinary income. Thus the EDA at-cks the problem of converting ordinary income to capital gain. It oes not, however, question the validity of the loss that permits an ıproper deferral of taxes if the loss is not an economic loss.

. *S. 500, Senator Metcalf's Bill*

The initial analysis of the farm loss problem demonstrated that en the generous farm tax rules could not do more than exempt farm ofits from tax, if the farmer had no outside income. This Bill ap-ırently attempts to reach somewhat the same result by treating tax-ıyers having large nonfarm income as if their farm operations were rried on apart from their other activities. By eliminating or at least ducing the spillover of artificial "farm losses" against income pro-

ildings would be excepted. Gain on farm land would be subject to recapture only to e extent of § 175 and § 182 expenses (soil and water conservation expenses and land aring expenses that would be capitalized absent these provisions but not including § 180 tilizer costs, which would also be capitalized absent § 180) incurred within five years fore the sale with respect to the property sold. *See* PRESS RELEASE BY CHAIRMAN MILLS, *bra* note 52.

duced by other activity, farmers having large nonfarm income would be brought nearly to a parity with farmers who do not have substantial nonfarm income.

On the other hand, tax losses resulting from true economic losses from farming are not to be treated less favorably than losses sustained in nonfarming businesses. An economic loss can be determined by proper accounting, and the limitations of the Bill would not apply if the taxpayer elected to forego the special farm accounting rules. Instead, if accounting rules applicable to business generally—and to farming itself apart from taxation—were adopted to insure that tax losses were real and not simply the result of accounting distortions, a taxpayer would be excepted from the Bill. To fall under the alternative, a taxpayer would have to elect to use inventories when they were a significant factor and also elect to capitalize all capital expenditures, including development costs incurred prior to the time when the productive stage is reached in farm operations.

Absent the election, a taxpayer could not deduct in any one year more than $15,000 of a farm loss against income from sources other than farming, and even the first $15,000 of deductible loss is decreased by one dollar for each dollar of nonfarm adjusted gross income in excess of $15,000. Thus at $30,000 of nonfarm adjusted gross income, no farm loss would be allowed. Apparently, the first $15,000 of loss is allowed to prevent application of the Bill to farmers who may have to supplement their income with part-time employment or with employment during the off season. The Bill assumes that if a taxpayer has no more than $15,000 of nonfarm income, he is the type of farmer for whom the special accounting rules were devised. As his nonfarm income progresses upward from this figure, he becomes less like such a farmer with each dollar of nonfarm income, until his income reaches $30,000 at which time he must choose between proper accounting and use of farm losses against other income.

A farm loss would be defined generally as the difference between the total of a taxpayer's farm expenses and his farm income. Farm income would include only the one-half of farm capital gains that is included in adjusted gross income. It could also include the income of an operation related to and conducted on an integrated basis with the farm operation. If the difference between expenses and income is more than $15,000, only the first $15,000 of the loss could be deducted. The disallowed portion would first be reduced by the excluded one-half of farm capital gains. Thereafter any balance could be carried forward

d backward as a deduction against net farm income of other years cluding the taxable one-half of capital gains) to avoid imposing rdships when the taxpayer incurs a large isolated loss in one year.

Certain deductions are excluded from the farm loss computation. ıe result is that they are thereby allowed even though the loss may ceed the $15,000 limit. These deductions are (1) taxes and interest, casualty, drought, and abandonment losses and expenses, and (3) ses on the sale of "farm assets,"[57] which as defined in the Bill in- ıdes any property used in the trade or business of farming under tion 1231(b)(1), (3), or (4). The first category consists of items gen- lly deductible whether or not they are attributable to the carrying of a trade or business. The second consists of items not in the tax- yer's control, and disallowance of them might create an undue hard- p to the taxpayer. Notably, these same expenses and losses are ex- ıded from the operation of present section 270. The third category osses incurred on the sale or other disposition of section 1231 assets property used in the farming business. These losses generally repre- ıt real economic losses and not artificial "tax losses" created by the cial farm tax accounting rules. It must be noted that the unlimited duction of all the above items would be in lieu of the $15,000 limita- n.

When the farming activity is carried on by a partnership or a Sub- ıpter S corporation, the farm nature of the income and expense uld be carried over to the individual partners or shareholders who uld aggregate the income and expense with all of their other farm erations. The $15,000 limitation would then apply to any loss com- ted on this individual aggregate basis unless each of the entities m which the individual derived farm income or deductions had de the election described above.

The obvious design of this Bill is to treat farming as a special in- stry and confine the tax benefits of the farm tax rules to farm in- ne. It is apparently premised on the notion that the farm accounting es are so generous that farming is a special business, which should isolated. The effect is to build a wall around farming and to allow of the special rules to apply only within the walled territory. Only foreswearing the special accounting rules and electing to apply nor-

[57] At the hearings on the farm loss problem, Representative Byrnes expressed concern ut the effect of the Bill on a feed lot operation when there was a sudden drop in price. ı REFORM 1969, at 2149. If the category of assets were expanded to include ordinary ome assets, the change would handle the situation by allowing the loss. Another wer may be that feeder operations may not be farming. Moody-Warren Commercial , 29 B.T.A. 887 (1934).

mal accounting can a taxpayer destroy the wall insulating the tax a pects of his farm from his other income. This general theory breached somewhat in allowing some loss, the first $15,000 if othe adjusted gross income does not exceed $15,000, to be deducted. Th allowance, however, arises only in an effort to define a farmer, an thus its benefits are limited to farmers.

By isolating farm income, the Bill is designed to preserve the ca ital gain treatment accorded farm assets and the farm accounting rule while limiting their effect to farm income. It proceeds on the assum tion that the use of the farm loss against other income is the practic to be curbed.

The question to which we now turn is whether this isolation preferable to the continued allowance of losses but conversion of som capital gain to ordinary income as occurs under a recapture propos such as the EDA.

VII. Evaluation of the EDA and the Metcalf Bill

The theoretical underpinnings of the EDA and the loss disallo ance proposals are quite different. The first apparently concedes t propriety of the loss and argues that the resulting creation of capit gain is improper. The second proceeds from a belief that the abu lies in the current use of the farm loss against other income but san tifies capital gain treatment of certain assets. The question of whic is better might be answered on just these theoretical distinction More appropriately, one may inquire into the practical differences operation. This is done below first by analyzing the general theory each and then by taking account of the special wrinkles each offers its published form.

A. The Recurring Loss

Assume a hypothetical case, with a consistent pattern year to yea in which the net operating costs[58] each year of $100 produce anima that may be sold at $110. Since the animals do not qualify for capit gain treatment until they have been held more than twelve month there are no sales the first year even though the cost is incurred. Th costs in the first year of operations are $100, and the product woul

[58] In this context, we may assume that a part of each animal crop is sold a reported as ordinary income but that the proceeds of such sales are $100 less than t costs of the entire farm operation. In the following year, culls from the prior year's cr will be sold at $110.

der present law, become $110 of capital gains on sale in the second ar.

The EDA would permit the $100 "loss" in the first year to be ducted against income from other activities. To a taxpayer having effective marginal tax rate of 60 percent, the loss produces a tax ings of $60 on other income. These foregone taxes become an erest-free loan, which is not repaid for a substantial period. The s, however, is added to the EDA, which is $100 when the second r starts. The second years also results in net costs of $100, which l produce a $110 gain in the third year. The loss of $100 in the ond year is added to the EDA, and at year's end, it stands at $200. a consequence, the entire sales proceeds of $110 in that year are verted to ordinary income, giving a net ordinary income of $10 en combined with the $100 "loss." The full amount of the sales ceeds would be subtracted from the EDA. The balance in the EDA hen only $90. This balance is increased by the third year costs of 0, and the account totals $190 at that year's end. In the third year, entire sales proceeds of $110 are converted to ordinary income, l the same amount is subtracted from the excess deductions ac- nt. The amount in the EDA to be carried to the fourth year is n reduced to $80. The pattern is repeated until at the end of the venth year, the amount in the EDA account would be reduced to o. Thereafter, the taxpayer would report a $100 loss each year, ich would convert $100 of the sales proceeds into ordinary income, ulting in neither ordinary income nor loss. The additional sales ceeds of $10 would be reported as capital gain.

From this a rule may be derived—assuming an operation con- ently producing the same amount of costs and sales proceeds. The e is that the tax-free loan produced by the first year loss will be aid in equal annual installments over a number of years, which is ived by dividing the profit margin into one. Thus, if the profit rgin is only 2 percent, the period of the loan is 50 years; if 4 per- t, the period is 25 years; if 10 percent, the period is 10 years.

In comparison, the Metcalf Bill would not allow any loss in the year, but the taxpayer would have a farm loss carryover of $100 be used against farm income of the second year. Under that Bill, farm income of the second year would be only $55 (the taxed por- n of the capital gain of $110), and the loss of the second year would irely absorb this income. The excluded one-half of the capital gain, vever, would absorb the balance of the second year's loss as well as

$10 of the carryover. The carryover to the third year would be onl $90; to the fourth year, $80. By the end of the eleventh year, the carr over would have disappeared, but no tax liability would have bee incurred in any of the years. Nor would operations thereafter incu any tax liability because the taxable one-half of capital gain woul always be less than the deductions available to offset it. The carryov would disappear, and if the operation were terminated in the thi teenth year, there would be a capital gains tax on the full sales proceed

Again, a rule may be derived. The farm loss carryover disappea at the same time that the taxpayer has repaid the tax-free loan und the EDA. Even after the carryover disappears no amount of tax w be paid unless sales proceeds are more than twice costs. This is t very nature of capital gain income. But no loss has offset any incor earned outside the farming operation.

The foregoing analysis assumes that the farming operation co mences after the EDA or the Metcalf Bill is enacted into law. Th effect on existing operations would differ slightly. Under the ED sales in the year of enactment would be denied capital gains to t extent of current excess deductions. There would be no deferral taxes on current expenses. But prior years' expenses would contin to be deferred, and assuming no change in operations, prior years' ferral would not be recaptured at capital gain rates until the operati terminated. If the operation were diminishing, the deferral of pr years' expenses would be returned at capital gain rates each year in amount in proportion to the diminution. A diminishing operati therefore, is just a termination occurring over a number of years. If operation were expanded, however, the expenses of the expansion that year would shelter an equal amount of outside income and per the tax to be deferred on the sheltered income in the described patt

The ability to increase the amount on which taxes have been ferred merely by increasing the size of the operation may be the we est point in the EDA. When this potential is combined with the tinuance of special accounting rules, the estate planning possibili begin to be apparent. Since losses are fully deductible with no pen prior to transfer, the EDA will encourage the shifting and prepay of expenses of the expanding operation with a minimum of sales this can be continued a sufficient number of years, the taxpayer leave a very bountiful estate to his bereaved, and they will take i a new basis without any excess deductions account.

Under Senator Metcalf's Bill, prior years' expenses are in essence erely forgotten. The chances are that they will never have any effect future tax liability and, in distinction to the EDA, will never be captured at all. There is, however, no loss deduction against other come and hence no potential for an increasing deferral. Similarly, e Bill is neutral on decreasing operations. The Bill should not pre- nt an incentive either for expansion or for diminution of operations.

The One-Time Development Loss

Having analyzed an operation having a recurring pattern, we ould now turn to an operation such as a citrus grove in which losses ulting from development costs are reported for a substantial period fore sale at capital gains rates occurs. For example, assume that an chard has a cost of $100 and a four year development period, during ich the deductible expenses are $100 each year. At the start of the h year the grove is sold for an economic profit of $200 or at a $700 es price.

Under the EDA, the annual loss of $100 could offset otherwise ly taxable income each year. A cumulative total of $400 in losses uld be reported, and on the sale, $400 of ordinary income and $200 capital gain would be realized. The result may be argued to be very se to a forced capitalization of costs except for the deferral of taxes current income. If the ordinary income in the year of sale is viewed just equalize the prior deductions, the EDA reaches the result on e that would flow from proper capitalization of costs. But in the antime, the cost has been currently deducted against other income h a consequent deferral of taxes on that other income.

Under Senator Metcalf's Bill, no losses would be allowed, but $400 carryover would insulate the entire $600 gain from tax be- se it would exceed the one-half of the gain reported for tax purposes. ere would then be a complete exemption of the gain from tax. In- d, the farm loss carryover could exempt from tax another $200 of m capital gain or $100 of ordinary farm income. This result fol- s from the language of the Bill in its present form, but as will be ed later, the Bill could be strengthened to avoid this result by caus- the farm loss to be absorbed against the untaxed as well as the ed portion of capital gains.

The immediate reaction to the foregoing is that the EDA is greatly erior to the Metcalf Bill because the latter continues to permit sub-

stantial income to be untaxed. This ready answer may not, howeve withstand analysis and some effort to quantify the benefit of the d ferral of taxes granted by the EDA. We turn now to that task.

If EDA is applied to the above example, a taxpayer in the 6 percent bracket would realize a tax savings of $60 in each of the fou years in which $100 of costs were incurred. If his rate is the same i the year of sale, the only effect is to loan the taxpayer $60 for fou years, an additional $60 for three years, an additional $60 for two year and finally an additional $60 for one year. In the fifth year when th grove is sold, these loans are repaid by converting $400 of the gain ordinary income. In addition, the taxpayer would pay a capital gai tax on the economic profit. If a taxpayer could borrow at rate 7.5 percent[59] per annum, these loans would have had a value of $ (that is, a savings in interest expense if the funds were borrowed) the taxpayer. The capital gains tax he would incur would be $5 Therefore, there is a net tax detriment of $14 to the taxpayer. If eith the interest rate or the period of deferral are increased, however, t odds in favor of the taxpayer increase. For example, if the borrowi rate is 10 percent, there is a virtual standoff, or if the developme period is extended two years, the taxpayer's interest-free loan mo than exceeds the value of the capital gains tax. On the other hand, the profit margin is greater, the taxpayer will pay a greater tax.

This analysis suggests that the ability to defer taxes, which m ultimately be paid, even at ordinary rates, can be just as valuable complete exemption from tax, particularly capital gains tax. The c clusion as to the efficacy of the EDA as compared to the Metcalf B then depends on a number of factors that may vary from taxpayer taxpayer, from year to year, and from farm to farm. We shall retu to this question later.

C. *Lock In v. Force Out*

The preceding discussion raises one other difference in the proaches; one would conclude that under the EDA the longer period of deferral, the bigger the reward to the taxpayer. Since deferral period exists until there are sales, the EDA might be said discourage sales and thereby to "lock an investor in" to his farm vestment. On the other hand, Mr. Metcalf grants a carryover, wh

[59] Some might argue that the evil is the foregone revenue to the Government that to measure the Bill's effectiveness from the Government's viewpoint, its borro rate should be used. While the choice may not be clear, the value to the taxpayer is concern here, and that is at his borrowing rate.

pires at the end of five years. If his Bill is to be utilized to its op-
num, the taxpayer must sell sufficiently often to absorb the carry-
er. The Bill then may be argued to "force out" a taxpayer at least
ce every six years.

An argument can be made that this difference would not exist in
actice because lengthy deferral under the EDA could lead to a serious
nching of income. Bunching would present a problem by raising
e marginal tax rate in a year of sale sufficiently to eliminate the de-
ral benefit. Thus the argument runs that bunching would tend to
ce sales to smooth out the income pattern. To the extent the realiza-
n pattern has large bulges, they may be somewhat ameliorated by
e averaging provisions of the Code.[60] Certainly, this is no time or
ce to delve into the mysteries of averaging, but if it operates per-
tly, it can tend to cause a realization of income at least once every
e years to gain the full benefit of averaging. The bunching and the
ead out obtained under averaging may be argued to undo the "lock
' effect and create its own "force out."[61] But all of this assumes that
e increase in tax rates resulting from the bulge in income cannot be
ndled in any other way and also that the benefit of averaging is
stantially reduced by exceeding the five year period. There is doubt
t either of these assumptions would be true in the majority of cases.
ere would then be little reason to bring the deferral period to an
l.

The Preferred Status of Other Farm Income

Both approaches grant a preferred status to ordinary farm income.
ile farm losses may be currently used to shelter any other income
der the EDA, a farm loss may ultimately result in farm capital gain
ng converted to ordinary income. If the farm loss in one endeavor
be used against other ordinary farm income, there will be no EDA
convert later farm capital gains into ordinary income. For example,
ther farm income can be found to equal excess livestock deduc-
ns, full capital gain treatment will be preserved on the livestock
s.

The Metcalf Bill might give an even greater impetus to diversify
n operations because the farm loss cannot be used against any other

[60] INT. REV. CODE of 1954, §§ 1301-04.

[61] On this analysis, a four-year development followed by sale in the fifth year would
ve the greatest tax savings, all other factors remaining the same. There would be
years of deferral, but income would be spread over five years. As suggested in the text,
ever, the benefits of averaging may not be significantly reduced by running beyond
five-year averaging period.

income. It therefore has no value whatsoever unless there is other farm income, while the EDA still permits use of the loss against other in come. If a taxpayer could produce other ordinary farm income equa to livestock deductions, the livestock deductions could entirely exemp this other farm income from tax under the Metcalf Bill while the live stock gain would be subjected only to capital gain rates.

E. A Quirk in the Metcalf Bill

One further aspect of ordinary farm income under the Metcal Bill should be noted. If we return to a simple case in which $100 o costs in the first year produces $110 of capital gain in the followin year, the carryover rules have a strange effect. After deducting on half of the capital gain in the second year, the farm income is $5 Under the Bill, the farm loss carryover of $100 from the first yea would, in the second year, shelter an additional $45 of ordinary far income from tax.

If the sales of livestock had been spread over the two years, th results would differ, however. If the taxpayer had realized $20 of ord nary farm income and $80 of livestock capital gains in the first yea the farm income would have been $60 ($20 of ordinary income pl $40, the included one-half of the livestock capital gains), and none it would have been taxable because the farm loss of $100 would offs the farm income. There would be no farm loss carryover to the secon year, however, because the farm loss ($40, which results from $100 costs reduced by $60 of farm income) available for a carryover wou be reduced by the one-half of the livestock capital gains deduct under section 1202. This amount is just equal to the farm loss, a there would be no carryover. The capital gains in the second ye would be $30 ($110 less the $80 of sales in the first year), which wou be reduced to $15 of taxable income by the section 1202 deductio There would not be any farm loss carryover to reduce the taxable i come further. The result is that the farm loss would have offset on the $20 of ordinary income realized in the first year and none of t capital gain or ordinary income in the second year. The explanation f this result is that the farm loss is not reduced by the amount deduct for capital gains under section 1202 for the purposes of determini how much farm income it can offset in the year of the gain, but is reduced for the purpose of determining how much is available carry over to later years. In this case, that amount eliminated the car over.

While this result may appear strange, it is consistent with the :ode's present treatment of net operating loss carryovers, which must e reduced by the section 1202 deduction in the year the loss is in-urred. The moral would appear to be to avoid capital gains in years f ordinary losses. The result is one that puts the taxpayer who is nable to avoid capital gains in loss years at a disadvantage, unless he an also realize other ordinary farm income. It is, however, consistent vith the view that only economic losses should be the subject of carry-vers. To fail to make this adjustment would put farm losses on a igher level than other carryovers—certainly not an aim of this Bill—ecause they could be carried over for use against other farm income n greater amounts than other loss carryovers. This result then treats arm loss carryovers like other carryovers except in so far as it limits neir use to farm income and is consistent with the theory of isolating nd segregating farm operations from other operations unless proper ccounting rules are followed.

. *The Small Farmer Exception*

The Treasury EDA is not increased in any year in which the loss oes not exceed $5,000. If operations are fairly consistent, this provi-on, in effect, would permit an annual loss deduction of $5,000 offset y capital gains of $5,000, which would not be converted to ordinary ncome. It could be exploited to the extent of $2,250 in tax savings ach year.[62] This is the maximum benefit that may be derived from nis exception.

The EDA floor might, however, be objectionable to some farmers vho apparently are the type of taxpayers intended to benefit from mplified accounting. The $5,000 figure is relatively low and is not oftened by excluding any deductions from the EDA. As a conse-uence the so-called "legitimate" farmers could lose some of the ben-fit of capital gain treatment.

The Metcalf Bill instead would allow a farm loss in the amount f $15,000 each year. This annual loss allowance may be the most erious defect of the Bill, although as later explained it may to some xtent be remedied by other features of the Bill. The problem may erhaps best be shown by taking a citrus grove as an example. Assume

[62] This is $5,000 multiplied by the difference between the top tax bracket of 70% nd the top capital gain rate of 25%. This benefit would be less under H.R. 13270, 91st ong., 1st Sess. (1969), which would reduce the top ordinary rate to 65% and eliminate ne alternative tax so that the top capital gain rate would be 32.5%. Under that Bill, ne $2,250 would be reduced to $1,625.

that the land and planting cost is $10,000; that cultural practice expenditures of $15,000 are incurred annually; that the grove reaches the productive stage in the seventh year of its life; and that it is then sold for $135,000, an economic profit of $20,000.

Under the excess deductions account, the taxpayer would claim his $15,000 loss each year and add $10,000 to the EDA. The account would total $70,000 at the end of the seventh year, and the balance would convert $70,000 of the sale proceeds to ordinary income. In addition, there would be a capital gain of $55,000, which would reduce to $27,500 of taxable income. This has two effects: (1) There has been a deferral of taxes on $15,000 of income each year for six years to total $90,000. (2) There is a bunching of ordinary income in the year of sale. While this aspect may appear to create a serious problem, the penalty arising from bunching undoubtedly would be greatly eased by income averaging under sections 1301-04. In addition, there has been a gross mismatching of income and expense.

On the other hand, the Metcalf Bill permits $15,000 loss to be deducted annually if the taxpayer has no more than $15,000 nonfarm adjusted gross income. Thus there is deferral of taxes on the income sheltered by the loss. The taxpayer in this example would have sheltered $90,000 of nonfarm income from tax over the first six years. Upon sale, there would be a capital gain of $125,000 (sales price of $135,000 less land and planting costs of $10,000). After the section 1202 deduction, this would be reduced to $62,500, which would become $47,500 of taxable income after reduction by the $15,000 of cultural practices expenditures in the year of sale. Thus the annual loss allowance, which was designed to define a farmer, has the effect of allowing uneconomic losses to offset other income and defer taxes on other income to the extent of $15,000 per year. When this loss is recaptured on sale, it is taxed at no more than capital gain rates. The continuance of this potential to shelter other income might induce investors to seek investments that limit the loss to $15,000 per year were there not other features of the Bill that should prevent much exploitation of the annual loss allowance.

While the Bill thus appears to have these drawbacks, it also reduces the annual loss allowance by one dollar for each dollar of nonfarm adjusted gross income in excess of $15,000. At $30,000 of nonfarm adjusted gross income the annual allowance disappears. In the majority of cases, it is doubtful that one having nonfarm adjusted gross income at this level will have funds to invest to produce a $15,000 annual

oss. Also the tax rate on a joint return at those income levels is less han 40 percent, and the tax savings, arising by permitting capital gain reatment on the sale, is not great because the difference in the ordiary income rate and the rate that would apply to bunched capital ains may not be great. Even so, a taxpayer having nonfarm adjusted ross income of less than $30,000 has some opportunity (but one, which eclines as income increases) to exploit a farm loss and need only anwer the question whether the play in tax rates is worth the risks and ıvestment inconvenience. Even with this criticism, the Bill signifcantly reduces the tax benefits of farm losses. *This problem does point ut that without the phaseout, the Bill would be a far less effective ool.*

. The Integrated and Related Exception

The Metcalf Bill also provides that if a taxpayer is engaged in ırming and one or more businesses, which are directly related to his ırming and conducted on an integrated basis with his farming, the ıxpayer may elect to treat all these businesses as a single business enaged in farming. The obvious purpose is to permit a taxpayer to treat nonfarm business, producing net income, as a part of his farming peration, to reduce the farm loss and thereby reduce the amount to hich the Bill applies.

The provision also raises a definitional problem in determining hether the two operations are related on an integrated basis. This roblem could be cured by providing that a business would not be onsidered as related and conducted on an integrated basis with the ırming operation, unless it consisted of the processing of a product aised in the farming operation. Such an exception should apply only the sale of such processed produce produces a substantial portion of ıe total receipts of the overall operation.

Even with this modification, the provision raises the spectre that ıe Bill might fail to achieve its goal by permitting the offsetting of ome "farm losses," arising from the farm tax accounting rules, against ıcome earned in other business. For example, a taxpayer might be ngaged in processing frozen orange concentrate from an orange grove n which large expenditures and consequent "farm losses" were inurred because a part of the grove had not yet reached full production. The grove, as a whole, presumably would be related to and conducted n an integrated basis with the concentrating business, and the special enefit of deducting "farm losses" against income from the concen-

trating business would be continued. Primarily, this provision would benefit those taxpayers who have the capital and resources to engage in a business related and integrated with their farming operations. With respect to these taxpayers the Bill would not accomplish its basic objectives, even though these taxpayers would not appear to be the type of taxpayer for whom the special farm accounting rules were devised.

Thus, even if modified as suggested, the Bill might not accomplish its basic purpose. The treating of separate businesses as a single operation departs from the usual practice in administering the tax law and may raise problems neither foreseen nor foreseeable at this time. There is little to be said for the provision, and it should be eliminated.

The EDA has a similar exception, which is not explicitly stated. Since the EDA converts capital gain to ordinary income only on a sale, it would never be actuated in many industries. For example, the frozen orange juice concentrator just mentioned might never sell the grove. If he did not, the EDA would have nothing on which to operate. The EDA would thus continue to permit the offsetting of farm losses against income from other sources for which the taxpayer would pay no penalty.[63]

H. Specially Treated Deductions Exception

The Metcalf Bill permits a taxpayer to choose between the $15,000 annual loss allowance and the total of certain so-called specially treated deductions. These deductions are taxes and interest, losses and expenses arising from abandonment, casualty, or drought, and recognized losses under section 1231. The theory seems to be that these losses are indeed economic losses and should not be subject to the disallowance rule. There is considerable appeal to this position, and it probably reaches a proper result.

In contrast, the Treasury's EDA makes no exception for such expenses. It should be noted that the EDA never disallows a loss. Rather, it is the measure of later capital gain that will be converted to ordinary income. A failure to exempt these expenses from the EDA must rest on the premise that either (1) the $5,000 annual exception will

63 Interestingly, the racing industry is not satisfied even with this unstated exception. Under the tentative decisions of the House Committee on Ways and Means, horseracing and horse breeding would be treated as a combined operation. *See* PRESS RELEASE BY CHAIRMAN MILLS, *supra* note 52. Section 211 of H.R. 13270, 91st Cong., 1st Sess. (1969), also embodied this concept. This will permit tax losses from breeding operations to be offset against racetrack winnings.

account for them, or (2) the capital gain provisions are so generous that any loss, whether economic or not, should be used as a means of recapturing ordinary income deductions. In either case, the reasoning seems to be a little thin, and it seems likely that exclusions of some sort will be made.

I. *Both Approaches Involve Certain Assumptions Regarding Causes and Effects of Losses*

Both the EDA and the Metcalf Bill may be characterized as being arbitrary. The EDA operates on the premise that a farm loss creates capital gain. Perhaps a fairly valid assumption, but it may not be true when the loss results from casualty.

Similarly, the Metcalf Bill's denial of a loss is not explicitly limited to artificial losses created by the special farm accounting rules. The specially treated deductions exception may have virtually that effect, particularly if modified as hereinafter suggested. Its assumption that any remaining loss is created by the special farm accounting rules is on balance probably a fairer assumption than the asumption underlying the EDA.

Criticism of either proposal on this ground is not serious, and both underlying assumptions could be argued to be valid in a sufficiently large majority of cases to provide a basis for legislative action.

J. *A Final Note on the Metcalf Bill*

As previously noted, limiting the amount of a farm loss deductible against the amount of other farm income will ordinarily remove the so-called negative income tax effect. When farm income is only the included one-half of capital gains on which the tax rate is limited to 25 percent, however, deduction against ordinary income by a taxpayer having a tax rate in excess of 50 percent will continue to result in the negative tax effect. That is, one having a tax bracket greater than 50 percent will be able to achieve an effective tax of less than 0 percent on his overall farm profits because the tax saving from the loss deduction, although the deductible loss is limited to the taxable portion of capital, is greater than the tax on the capital gain.

The fact that the negative income tax effect is not entirely removed is not attributable, however, to either the cash method or the deduction of one-half of capital gains. Rather, it is solely attributable to the alternative 25 percent tax on capital gains. If rates on capital gains were not so limited but allowed to progress up to one-half of

the ordinary rate, the negative tax on farm profits would be fully remedied by this proposal.[64] The EDA does not suffer from this disability.

K. A Final Note on the EDA

As presented in 1963 and as under the current proposal, the EDA is a matter personal to the taxpayer. Apparently, the 1963 proposal would have applied upon any disposition of property while the current Technical Explanation deals only with "sales." Presumably, sales will be transformed into dispositions when the statutory language is drafted. If it is not, a number of transfers could permit the taxpayer to have had the advantage of the deduction while shifting the capital gain asset to another taxpayer. These transfers would include gifts, charitable contributions,[65] transfers to corporations under section 351, reorganization transfers, transfers to partnerships under section 721, transfers to trusts, corporate liquidations, transfers to or distributions by an estate or trust, and like exchanges and involuntary conversions.

The difficulty with imposing a tax on these transfers is that the taxpayer has not received any cash providing the wherewithal for paying the tax. In addition, the recapture provisions under section 1245 and section 1250 provide special treatment for these transfers (other than taxable corporate liquidations and distributions by estates and trusts), and the Treasury may be hard pressed to make a case for taxing transfers under the EDA, which are not now taxed under these recapture provisions. It is submitted that such a case can be made, however.

Except for a few industries such as the leasing of automobiles, most depreciable property subject to section 1245 does not by its very operation constantly produce merchandise for transfer, even though the merchandise so produced has also been used in the trade or business. The process of culling the livestock crop does produce this merchandise. The very nature of the business makes it inevitable that there will be substantial property that must be transferred. In most section 1245 cases, the property is either abandoned or transferred at nominal value. It may be argued that recapture is satisfactory in these

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[64] If the minimum tax discussed in TREASURY STUDIES, *supra* note 18, at 132 were adopted, the rates on capital gain would be fully progressive when it applied. *See* note 21 *supra*, which points out that H.R. 13270 would similarly eliminate the alternative tax.

[65] Under the Administration's program presented on April 21, 1969, a charitable contributions deduction would be denied to the extent of unrealized gain on any property, which if sold would yield ordinary income. TAX REFORM 1969, at 5152, 5492. *See also* TREASURY STUDIES, *supra* note 18, at 178.

ases but that it is unsatisfactory when transfers are inevitable and ach transfer presents a substantial tax avoidance opportunity. Thus ne abuse possibilities are worse in this case, and recapture just is not dequate to handle the problem.

If the tax is not imposed at the time of disposition, a substantial voidance problem can arise, although it might be possible to have ne EDA carryover to the transferee.[66] Even with a carryover, there ould still be the possibility of shifting substantial amounts of income om a high bracket taxpayer to a low bracket taxpayer.

. Making the Choice

Since the foregoing may not have made the choice between the reasury's proposal and the Metcalf Bill clear, perhaps we should re-urn to our early discussion in which the benefits of expensing capital xpenditures while reporting sales proceeds as capital gain were first pecified as (a) a deferral of taxes on an amount of other income equal o the prematurely deducted capital expenditures, (b) the complete xemption of profitable operations from any tax until the ratio of ales proceeds to costs exceeds the ratio of the ordinary tax rate to the apital gain rate, and (c) the negative tax effect that results, even hough the operation is profitable, if the deferred taxes under (a) are reater than the taxes paid on sale. Since none of these advantages enerally is available to other businesses, we should test any solution n light of the extent to which these benefits would be eliminated. n view of this criterion and based on the assumption that profit mar-ins in farming are low,[67] there would seem to be little doubt but hat the Metcalf Bill is superior to the EDA in the prime areas of buse; (a) development costs of plants, and (b) livestock. In addition, s later explained, the Metcalf Bill may reach some of the other areas f abuse.[68]

First, as to the matter of deferral, the Metcalf Bill begins to cut ff this benefit when the taxpayer's nonfarm income exceeds $15,000, nd at $30,000, the interest-free loan from the Government is no longer

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[66] If the EDA is carried over to the transferee, it presumably would reduce the EDA n the hands of the transferor. Thus a transfer to a lower bracket taxpayer may present n opportunity to reduce the ordinary income potential to the transferor.

[67] *See* 1963 TAX MESSAGE 1541, in which returns of two or three percent of livestock re estimated. There is little reason to think that returns have improved. *See Hearings on Tax Reform Act of 1969 Before the Senate Comm. on Finance*, 91st Cong., 1st Sess. 32 interim manuscript) (statement of Claude M. Maer, Jr. on behalf of the National Live-tock Tax Comm. on Sept. 22, 1969).

[68] *See* note 27 *supra*.

available. In comparison, the EDA does not disallow any loss. It has no effect on the deferral feature of deducting capital expenditures.

Second, the EDA seems to eliminate the prospect that a profitable operation will be completely exempt from tax. As we have seen, the Metcalf Bill permits this exemption to continue. This aspect of the Metcalf Bill could be remedied, however, by requiring that the full amount of farm capital gains be reduced by the "farm loss" before reducing the farm capital gains by the deduction under section 1202. The farm loss carryback or carryforward would be similarly limited. As a result, net farm gains would be taxed at least at capital gains rates.

But even without this change, it appears that the choice between the EDA and the Metcalf Bill remains the same because when profit margins are low, the deferral is much more advantageous than exemption from tax. This results because deferral is an interest-free loan on the marginal tax rate multiplied by the entire cost while exemption is an exemption from a capital gains tax on profit, which is low in relation to the cost. Thus, under the EDA, the interest-free loan from the Government is repaid rather slowly. For example, if costs consistently run $100 while sales are at a 5 percent profit margin or $5, the EDA permits a taxpayer to make no sales until the second year and to obtain the benefit of having deferred the tax on $100 over the following 20 years. If we assume a 70 percent taxpayer having in today's market a 7 percent borrowing rate, the annual benefit realized by the deferral is $4.90. In return for this benefit, he pays $1.25 of tax each year as the cattle are sold. The net benefit thus is $3.65, which reduces by 5 percent each year.

This savings may be compared to the exemption from tax of the net annual capital gain of $5, which is $1.25. This exemption would be achieved under the Metcalf Bill, but it has less value than deferral when profit margins are low.

When an asset such as a citrus grove is developed, the deferral aspect of the EDA may have substantially more benefit than exemption from tax. For example, if a $1,000 loss is incurred each year for a five-year period, a 70 percent taxpayer having a borrowing rate of 7 percent will be able to reduce his overall capital cost by 17.5 percent of the total cost just by the benefit of the deferred taxes. To obtain the same benefit in exemption from capital gains tax, the grove would have to be sold at an economic profit of 70 percent. If the grove is sold, the EDA will result in a bunching of ordinary income in the year of sale when the EDA is actuated and recaptures the prior deduc-

ons. While bunching might offset some of the benefit of deferral, if e taxpayer is not consistently in the top bracket, the averaging pro-sions of the Code may spread the bunched income over the deferral riod thus lessening the bunching, but the benefit of deferral would main.

In addition to the value of deferral resulting from the Govern-ent's loan for the amount of the deductions multiplied by the tax-yer's marginal tax rate, it also cuts the federal government in on e loss side of the transaction well before either the taxpayer or the overnment can know whether the venture will ultimately be a suc-ss. The value of this risk shifting is probably far more than the terest-free loan.

This brings us to the third standard: to what extent is the nega-ve tax eliminated? Under the EDA, the negative tax may occur if e sales proceeds are recaptured at a lower tax rate than the rate in fect when the expenses were deducted. Thus, if the taxpayer can vait retirement, a lower income, death, or achieve a transfer to a wer bracket taxpayer,[69] the taxpayer not only has the benefit of de-rring taxes on other income by currently deducting his farm costs, ut a negative tax can be effected.

The Metcalf Bill does not completely foreclose the possibility of negative tax subsidy. This potential is, however, preserved only (a) hen the abuse may at least be said not to be great (taxpayers who have ss than $30,000 of nonfarm adjusted gross income),[70] and (b) to those

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69 Nontaxable transfers of capital gain property may offer substantial opportunity to oid the EDA. There would appear to be some roadblocks to the transferee's achieving capital gain rate. First, in the case of livestock, it must be either draft, breeding, or iry livestock in the hands of the transferee. The fact that the livestock had such character the hands of the transferor would not establish the same character for the transferee. cond, an immediate sale by the transferee might be viewed as a sham with the sale oceeds being attributed to the transferor. Third, the transferee may himself have an DA, especially if he retains the transferred property any substantial time in an effort to ercome the first two problems. In these cases, both the transferor and the transferee ould incur raising costs, and in effect, the EDA would be divided between two taxpayers hile only the transferee would make sales subject to the EDA. This technique could lessen e amount recaptured at ordinary rates. Even if the transferee lost the capital gain eatment on sales proceeds, however, if his tax rate is less than the transferor's the gative tax effect is achieved.

70 If the farming operation is diversified and if these operations consist of a grain eration producing large ordinary income and a livestock operation producing large dinary deductions and cattle capital gains, the Metcalf Bill arguably can produce a gative tax by insulating the grain ordinary income from tax while subjecting the live-ock profits only to capital gains. This result can be argued to be exactly the same as ing excess livestock deductions to offset salary income while reporting livestock capital ins. While the force of this argument cannot be denied, there are at least two pertinent mments. First, even this result does nothing more than exempt farm profits from tax. here is no spillover of benefits into endeavors other than farming. Second, those tax-ayers, investing in farm assets solely for tax purposes, seem likely not to have diversified

taxpayers who have a marginal tax rate in excess of 50 percent. Fo example, in the latter case if a taxpayer in the 70 percent bracket has $50 farm loss and $100 of farm capital gains, the farm income unde the Bill just equals the farm loss that remains fully deductible agains other ordinary income. The loss would produce a tax saving of $35 while the farm capital gains are subjected to only a $25 alternative ta for capital gains. This latter undesirable effect results from th alternative tax on capital gains, but it could be prevented by a sligh modification in the Bill. If farm losses were required to offset farn capital gains *before* application of the alternative tax rate, there woul have been no farm loss to use against ordinary income. In the example the farm loss would have reduced the farm capital gain to $50 on whic a tax of $12.50 would have been paid. Thus the Bill may be structure to handle this problem.

In addition to these fundamental questions, the Metcalf Bill als reaches the so-called do-it-yourself averager who, under the Bill, woul not obtain any benefits by maximizing his loss in one year since i could not be used to insulate any income outside the farm assets. Th EDA would have no effect on this device.

Also, the Metcalf Bill may have some salutary effect on the tru hobby farmer who could deduct no loss unless he adopted a prope accounting method. If he did so, he could continue to deduct his hobb loss so long as he could prove it was more than a mere hobby. Adoptio of proper accounting would seemingly reduce the amount of the annua loss, although it might not remove it. On the other hand, if there ar few sales from the hobby operation, the EDA would have little impac

To sum up, the EDA fails to close the door on deferral, does nc eliminate the possibility of exempting farm profits from tax unle the amount subject to recapture is taxed at the same rates as th amounts deducted, and also opens wide the door of avoidance b transfers that will result in the negative tax effect. Neither does it reac the do-it-yourself averager. Its effect on the "hobby farmer" is ur predictable. On the other hand, the Metcalf Bill phases out deferr commencing at $15,000 of nonfarm adjusted gross income and con pleting the job at the $30,000 level. It does permit however, an e emption of some farm profits from tax, a matter to be discussed in th next section. It eliminates the negative tax for all but a few, but in

farm operations. Whether enactment of the Bill would encourage diversification by "t farmers" would depend on a number of considerations such as profit margins, interest rat risks, alternative investments, and similar factors.

ovements to be discussed will do away with this problem. It also aches the do-it-yourself averager. It might also have some effect on the obby farmer." On most counts the Metcalf Bill is superior to the DA. This conclusion suggests that recapture of any sort is a most in-fective tool.

. *Improvement in the Metcalf Bill*

Having decided that the Metcalf Bill addresses the problem more rectly, we should note that a number of changes could be made to e Bill that would improve it substantially. The following might be nsidered:

(1) Losses on ordinary assets (as distinguished from section 1231 sets) might be included in the category of specially treated deductions. hese losses are true economic losses, and there is no reason to disallow em. The failure to include them would appear to be mere in-lvertence. These losses probably would not occur in many cases, for ost of the farm assets producing ordinary income either have no basis are held in an inventory. In the former case, a loss could not be alized on the sale, and in the latter case, the taxpayer probably would t be subject to the Bill in any event because he would qualify under e provision excepting taxpayers using inventories and capitalizing pital expenditures.

(2) The Bill now allows an annual allowance of $15,000 if the xpayer's nonfarm income does not exceed $15,000. For each dollar ove $15,000 of nonfarm income, the loss allowance is decreased by e dollar. The obvious purpose is to exempt the so-called legitimate rmer who may have a small outside income. Without this very im-rtant feature of the Bill, it would be far less effective. The $15,000 ure may, however, be too high, and the Bill's author might consider lding an alternative phaseout so that two dollars of loss would be sallowed for each dollar of unearned investment nonfarm income more than $5,000. The present phaseout should remain, and the e permitting the smallest loss would govern if there were any con-ct between them.

(3) As previously noted, a number of taxpayers may purchase eeding herds, depreciate them for a short period, sell the herd, and alize substantial capital gains on the excessive depreciation. While is practice appears improper, there may be an enforcement problem ising from the inability of the Internal Revenue Service to audit

all taxpayers. The enforcement problem could be solved automaticall by including livestock in the recapture provisions under section 1245 Logically, there is no reason to exempt livestock, and it would prohibi finagling with depreciation, even though the taxpayer elected accrua accounting in order to avoid application of the Bill.

(4) Under the Bill, the farm loss would be permitted to offse other farm income, and it may also be carried over to other years. I neither case does farm income include the untaxed portion of capita gains. A loss of $50 may thus continue to offset $100 of capital gai income in either the year of loss or when used as a carryover. This di ficulty could be removed by requiring the loss first to be applied agains ordinary income, and any balance then could be applied against capita gain income before the section 1202 deduction or before applicatio of the alternative capital gain rate. The same treatment would b prescribed for carryovers. Thus, in the case in which the farm capita gain in the current year is $100 and the farm loss is $50, the capita gain would be reduced to $50 on which a tax would be paid. If ther were also ordinary farm income of $20, the farm loss would be r duced to $30, and the farm capital gain would be $70. Exactly the sam treatment would be accorded carryovers. For example, if the curre loss is $50 with no capital gain until the following year, when $100 farm capital gains are realized, the $50 loss carryover would redu the capital gain to $50 on which a tax would be paid.

An alternative to the suggested treatment would be to requi that the farm loss to be an adjustment to the basis of assets. This woul necessitate deciding whether to adjust the basis of ordinary income capital gain assets. It could also raise administrative problems if depr ciable property were involved by presenting a new depreciation ba each year. If, however, the alternative of a basis adjustment were chose presumably the adjustment would not be permitted to create losses b only to reduce gains to zero.

VIII. In Defense of the Faith

We have spent much time discussing the present farm tax rul and considering solutions. While all of this should make the need f a remedy clear, we would be remiss if we did not grant the oppositic an opportunity to be heard. We now turn to it.

The House Committee on Ways and Means has twice held hea ings on the farm tax loss problem.[71] The interesting aspect of the

[71] 1963 Tax Message 1537-97; Tax Reform 1969, at 2001-183. Since writing the te

earings is that even those opposed to any proposed changes in the law ote that there are abuses of the present scheme. The definition of ouse,[72] however, appears to depend on the speaker. Some speakers efend the subsidy to certain agricultural activity, even though it benits a taxpayer whose major distinguishing feature is a source of large come from nonagricultural income. The defenses offered by these eakers are to be discussed.

. *The Proposed Solutions Discriminate Against Farming*[73]

One of the more frequent complaints is that directed toward the cess deductions account in 1963. The argument was made that it ofred a special set of rules for farming. Similarly, the same argument as made at the hearings last March.

Undoubtedly, this argument states a truism. There is, however, a ason for this discriminatory treatment. Farming is an industry havg a special dispensation from tax accounting provisions otherwise havg general application. This dispensation is the use of cash accounting nd the expensing of capital expenditures when these procedures do ot properly reflect income. It seems proper that losses created by speal rules should be treated specially. Under either the Treasury's EDA the Metcalf Bill, the special treatment of losses may be avoided by ving up the benefit of the special accounting rules. The special treatent ends when the benefit of special accounting rules end. Real ecoomic losses, determined under accounting practices generally applible to industries other than farming, then would be treated exactly real economic losses in other industries. They would be fully deuctible.

. *Present Law Is Adequate To Handle the Job*[74]

Opponents of change sometimes argue that section 270 of the Irnal Revenue Code (which disallows business losses when they exceed

e Senate Committee on Finance on September 22, 1969, has received testimony on rm losses.

72 *See* 1963 TAX MESSAGE 144-45; 1963 TAX MESSAGE 1546 (statement of Stephen H. art); TREASURY STUDIES 16, all of which assert that the abuse lies in rewarding unecoomic, *i.e.* unprofitable, farm operations by granting tax profits. *See also* 1963 TAX MESSAGE 81 (statement of Arthur Levitt), which focuses on the sale of livestock to investors at ices greater than fair market value.

73 *See* 1963 TAX MESSAGE 1574 (statement of Jacquin D. Bierman); 1963 TAX MESSAGE 40 (statement of Stephen H. Hart); 1963 TAX MESSAGE 1559 (statement of Floyd L. adden); 1963 TAX MESSAGE 1569 (statement of James Trimble); TAX REFORM 1969, at 55 (statement of Herrick K. Lidstone); TAX REFORM 1969, at 2035 (statement of Claude aer); TAX REFORM 1969, at 2152 (statement of George D. Webster).

74 1963 TAX MESSAGE 1574 (statement of Jacquin D. Bierman); TAX REFORM 1969, at 35 (statement of Claude Maer); TAX REFORM 1969, at 2107 (statement of R.H. Matthiesn, Jr.).

$50,000, for 5 consecutive years) along with the hobby cases are ade quate to deal with the "farm loss" problem.

The second of these assertions is obviously not true. Indeed th hobby loss was specifically excepted when we started our inquiry. W are dealing with cases in which there is a desire to make a profit, an a profit may well be made. Even so, there is a tax loss that results i a negative income tax result.

As to the other assertion, section 270 is not adequate for many rea sons. First, even though not included in taxable income, the deducte one-half of capital gains may be added to farm income to determin whether the loss exceeds $50,000. Perhaps of even greater significanc however, is the exclusion of certain expenses from the expense sid (thereby lessening the loss), for the purpose of ascertaining whethe section 270 applies but not for the purpose of the tax computatio Any expense that a taxpayer has an option either to capitalize or t expense is excluded. Therefore, the very expenses that create the ta loss[75] do not enter into the computation, which determines whethe the section will be applied.

While these liberalities would prevent application of the sectio to most taxpayers, a final escape hatch is offered by the cash accountin method, which to some extent permits the deferral of both incom and expense while also offering the opportunity to anticipate both i come and expenses. The combination of these deficiencies permits a but the hopelessly incompetent or blissfully unaware to avoid the a plication of section 270.

C. *Outside Capital Necessary to Agriculture*[76]

Another reason strongly stressed for no change in the present ta law is the need for "outside" capital in agriculture. History is cited t support this conclusion. The argument hinges on the plea that, wit out the tax benefits offered farming (notably livestock), the outsi capital would not be attracted and presumably something disastro to agriculture and to the American consumer would result.[77]

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75 *See* Sonabend v. Commissioner, 377 F.2d 42 (1st Cir. 1967).

76 *See* 1963 TAX MESSAGE 1587 (statement of Jay B. Dillingham); 1963 TAX MESSA 1566 (statement of William Greenough); 1963 TAX MESSAGE 1567 (statement of B. Ea Puckett). *See also* TAX REFORM 1969, at 2129 (statement of John Asay); TAX REFORM 196 at 2125 (statement of George Hellyer); TAX REFORM 1969, at 2035 (statement of Clau Maer).

77 *See* 1963 TAX MESSAGE 1588 (statement of Harold W. Humphreys), in which claims that without the subsidy to livestock "the very necessary proteins would have be priced beyond the reach of millions of our consuming public." For an opposing vie expressed by one of the strongest advocates of the present tax subsidy, see Oppenheim

Because this author is not an economist, this article is certainly : a forum in which to argue the economic effect of our many tax ›visions. Let me comment briefly, however, on the several facets of s argument as follows:

(1) As noted by one witness in 1963,[78] outside capital has been :essary to agriculture since as early as the Civil War. There was no ome tax system then and no tax subsidy. Yet agriculture managed attract the necessary capital.

(2) Demand for agricultural products, *i.e.*, the ability to sell, not ax benefit, creates the need for farm capital. If that need continues l if farm prices are inadequate absent the tax subsidy, farm prices l increase to provide an adequate attraction.

(3) By eliminating the "tax farmers" who can survive with a ser profit than one who does not have outside income, those who largely devoted to farming may be attracted to stay rather than to driven out.

(4) There is not likely to be any effect on prices.[79]

(5) If special incentives are needed, certainly Congress can work t a system that avoids the negative income tax and benefits all par- ipants evenly across the board or in a more rational manner than e present scheme, which confers the greatest benefits on those hav- g the greatest amounts of outside income.

The Rules Encourage Research Development[80]

Often the claim is made that development of purebred seedstock dependent upon the present tax rules permitting deduction of those sts.

This claim seems to say that there must be a profligate waste of nds in order to secure some very remote benefits resulting from loss erations. If subsidies are needed for research, they can easily be pro- ded without wasting funds on those merely in the business of pro- icing meat. The question is whether we should continue to subsidize e many to benefit a few.

In addition, if these expenses are true research and development

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e Case For the Urban Investor, 24 FARM Q. 80 (1969); 115 CONG. REC. 2033 (daily ed.). 25, 1969) (reprint of speech given by Brig. Gen. H.L. Oppenheimer at the National rm Institute, Des Moines, Iowa, Feb. 14, 1969).

78 *See* 1963 TAX MESSAGE 1566 (statement of William Greenough).

79 *See* note 77 *supra*.

80 *See* TAX REFORM 1969, at 2035 (statement of Claude Maer); TAX REFORM 1969, at 07 (statement of R.H. Matthiessen, Jr.); TAX REFORM 1969, at 1567 (statement of Earl Puckett).

expenses, they may be deducted under section 177 merely by electing accrual accounting under the Metcalf Bill. A similar election will avoid the EDA.

This argument also presumes that the losses under discussion are true economic losses. That is highly doubtful. First, if the taxpayer has no other farm operation, he is not likely to be engaged in a consistently profitless research program. It undoubtedly would be structured to turn a profit some day. Under the Metcalf Bill, his losses may be carried forward to that day to offset against the gains. If he wants to use them today, he may elect accrual accounting. Under the EDA the taxpayer's present use of the loss at ordinary income rates is recaptured at the same rate.

Finally, the claim that this is just like the research division of a corporation overlooks the fact that those divisions usually are a part of an integrated operation that produces profits. This differs from the cattle situation in which the tax losses are suffered by an operation not related to another division. In the cattle case, only the tax losses are reported. There are no ordinary income profits. This, of course indicates that the losses are not economic losses.

E. The Present Scheme Does Not Produce a Revenue Loss[81]

The claim is often made that the negative tax effect costs the Treasury nothing. This claim must have either one of two meanings.

First, the economic activity supported by the subsidy increases the federal government's revenue because the subsidy dollars are spent with suppliers of agricultural goods who pay tax on their receipts. Under this view, most expenditure programs would have no cost to the Government. Obviously, it cannot be used as a measure of the revenue loss.

Second, the charge may be that cattle operators pay taxes. Indeed one witness at the recent reform hearings pointed out[82] that in 196 his clients had ordinary income of $15,000,000 and capital gains of $4,000,000. Also, his clients' inventories increased by $3,000,000.

One should not, however, conclude that these taxpayers paid an tax on their cattle operations because the witness also pointed out tha

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[81] *See* 1963 TAX MESSAGE 1581 (statement of Arthur Levitt); Oppenheimer, *supra* note 77.

[82] TAX REFORM 1969, at 2132 (supplementary statement by Brig. Gen. H.L. Oppenheimer).

hey spent $20,000,000.[83] An analysis of this example, however, again llustrates the problem in the farm area. Take the witness's figures:

Net expenditures	$20,000,000
Less ordinary income	15,000,000
Difference	$ 5,000,000
Less taxable one-half of capital gains	2,000,000
Net tax loss	$ 3,000,000

The farm loss of $3,000,000 applied against other income would ertainly produce some tax savings. Thus there was a cost to the Treaury.

The comparison to other businesses is interesting. First, the 3,000,000 loss would be reduced by $3,000,000, which went into the nventory or products to be sold in the future. This would reduce the oss to zero. If the $4,000,000 reported as capital gain were fully taxble, however, as it would be in most other industries, there would be *et profits* of $2,000,000. Instead, the taxpayers in the cattle operations eported a *net loss* of $3,000,000.

. Any Change Would Force Many Farmers Onto Accrual Accounting, Which Is Just Not Possible[84]

This claim is really two contentions. Both appear equally erroeous.

First, not many farmers would be affected by the Metcalf Bill. In 966 there were 3,000,000 families living on the farm. Less than 4 perent of those families had $15,000 of *gross income from all sources.*[85] The Treasury Staff Studies[86] estimated that 14,000 taxpayers would be ffected by its proposal. The Metcalf proposal would reach a larger roup because of his phaseout of any deduction at the $30,000 nonarm adjusted gross income level. In no event, however, could it reach nore than 120,000 farmers (4 percent of 3,000,000 families). Thus cerainly not a large part of the farm population would be affected. The DA recommended by the Treasury in 1969 would reach no more han 80,000 farmers.[87]

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83 The fair assumption is that all of this amount is deductible. The witness claimed at there was no revenue effect of the deduction because the payees would take the nounts into income.

84 *See* TAX REFORM 1969, at 2035 (statement of Claude Maer); TAX REFORM 1969, at 001 (statement of Jack Miller).

85 U.S. DEP'T OF COMMERCE, CURRENT POPULATION REPORTS, CONSUMER INCOME, ser. -60, No. 15, at 23 (Dec. 28, 1967).

86 TREASURY STUDIES, *supra* note 18, at 158.

87 U.S. TREASURY DEPARTMENT (unpublished tabulation of statistics of income).

The second claim that accrual accounting is just not possible also seems refutable. It is now used by some taxpayers. There are inventories that permit an approximation of the cost of raising animals. While they may have their problems, they at least may be employed and would more accurately reflect income than the present scheme, particularly if the changes discussed above were adopted.

G. *The Present Scheme Is a Deliberate Subsidy Carefully Designed by Congress*[88]

Many proclaim that the interplay of current deduction and capital gains is a well thought out subsidy. While there may be some superficial appeal to this argument, it will not withstand analysis.

The farm problem under discussion arises out of (1) deducting capital costs and (2) conferring capital gains on certain assets. As was traced in some detail above, the first aspect of this combination developed very early in the administration of the income tax law. It was also developed by an administrative agency, which had no authority to conceive and implement plans for the distribution of federal money. It does not seem likely that this portion of the present law had an deliberate conception as a subsidy.

The capital gain portion of the combination seems equally a accidental. The 1942 amendment, which first brought cattle into the capital gain arena, certainly makes no reference to the subsidy impac

After doubt and controversy arose in the 1940's, the farm interests succeeded in getting legislation in 1951. But neither in 1950 no 1951 was there any discussion of the subsidy effect of conferring capital gains on livestock. The plea rather seemed to rest on clearing u confusion and giving the treatment to farm assets that was accorde other businesses.

Not until 1952 was there any discussion of the tax policy effe of these provisions.[89] While the Treasury's presentation of the exce deductions account in 1963 and in 1969 focused on the two aspec at the heart of the farm loss problem, they do not put the proble in its proper posture. These aspects are (a) the use of farm losses t offset other income and (b) the production of a tax profit when the is an economic loss.

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88 *See* 1963 TAX MESSAGE 1574 (statement of Jacquin Bierman); TAX REFORM 1969, 2124 (statement of Jay B. Dillingham); TAX REFORM 1969, at 2107 (statement of R. Matthiessen, Jr.); TAX REFORM 1969, at 2120 (statement of Brig. Gen. H.L. Oppenheime *See also* Oppenheimer, *supra* note 77.

89 *See* Letter from Secretary Snyder, *supra* note 16.

The second aspect was universally denounced by the witnesses vho appeared before the Ways and Means Committee in 1963 and n 1969. It hardly seems likely that failure to take action condones a ystem achieving that result. Rather, in the words of Representative Vatts,[90] there was difficulty in separating the sheep from the goats.

As to the first point, the Treasury seems content to show that the osses, artificially produced, are used to offset income of another en-eavor. While that statement is accurate, it does not demonstrate that n fact a profitable operation is not only paying no tax but is indeed eceiving a subsidy from the Treasury in the form of reduced taxes n other income. Certainly, the latter statement of the problem is ard to defend and truly illustrates what is happening. Short of a pre-entation in this fashion, it is doubtful that one can say that Congress as condoned it.

In 1952 only the Senate Finance Committee considered the mat-r, and in 1963 only the House Ways and Means Committee con-dered it. The failure of these committees to act on the basis of the ot well directed testimony of the Treasury should hardly be con-rued as congressional approval of a subsidy system, particularly when at subsidy is not available to the individual engaged only in the ac-vity, which, if the argument were accepted, Congress intended to bsidize. In 1969, the House took action by incorporating the EDA to H.R. 13270. While, as later discussed, the provision adopted ould likely be largely ineffective, it does manifest a notion that this bsidy has difficulties, which require pruning, if not elimination.

IX. Conclusion

Our existing farm tax laws permit taxpayers having income from her sources to invest in farm assets to a large extent at the expense the public fisc. While it has been argued to be a deliberate subsidy farmers, this seems doubtful on the record. It also seems implausible at Congress intended a subsidy that has little or no value to one ving only the kind of income that it intended to benefit. The argu-ent would mean that one hand giveth while the other taketh, by ducing unfair competition from the "tax farmer" who because he s sources of other income can subsist on little or no economic profit. hus, even if Congress did intend the present scheme as a subsidy, it ould be recast in a more rational form.

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[90] 1963 Tax Message 1558.

This subsidy is a negative income tax because the tax savings resulting from the premature deduction of capital costs against ordinary income is greater than the capital gain tax incurred on the sale of the property. There are now pending several proposals that measurably improve the tax law. None of them attacks the problem directly. Rather, they attempt to preserve some part or all of the tax benefits for selected taxpayers. As a consequence, they are complex. Since the complexity arises from an effort to maintain simplicity for the vast majority of farm taxpayers, the burden of complexity will fall only on those who want to retain whatever benefits remain after enactment of the remedial legislation.

Of the proposals pending, the Metcalf Bill offers the best designed solution. It is directed to the current offsetting of artificial farm tax losses against nonfarm income. It does not concede the propriety of this offset and consequently need not seek to impose a penalty at some later date, when the capital nature of the earlier losses is finally revealed. It is well designed to limit its application to artificial losses. It does not present the estate planning possibilities of some of the other solutions, and it does seek to exempt many farmers.

Since the Metcalf Bill appears to offer a better solution, it is lamentable that the Treasury's 1969 proposals did not endorse it, as did the previous Administration. Rather, the Treasury opted to present a solution which *may* accomplish many of the objectives. But by rejecting the Metcalf Bill proposal and advancing its own, the Treasury will find that effort, which could have been expended on passage of a solution, will be directed to demonstrating the superiority of its solution. This may prove a difficult, if not impossible task, that will undoubtedly annoy many of the proponents of the Metcalf Bill. Therefore, the fight may degenerate to one between those who want some action rather than between that group and those who have prospered from and are interested in maintaining the *status quo*. One doubts that the principles, which led to rejecting the Metcalf Bill, could be worth the loss in solidarity. Indeed, the principles, which militated so strongly against the Metcalf Bill, are not clear.

Be that as it may, the House Committee on Ways and Means at one time tentatively adopted the EDA substantially as recommended by the Treasury.[91] While it might have achieved some needed reform, it undoubtedly would have presented the opportunity for the artful tax lawyer to plan around the EDA. But the Bill reported out by this Committee and passed by the House appears to be about as an ineffec-

[91] *See* PRESS RELEASE BY CHAIRMAN MILLS, *supra* note 52.

tive version of the Treasury's suggestions as could be envisioned. As passed by the House, taxpayers having nonfarm adjusted gross income of less than $50,000 would not be required to keep an EDA. Furthermore, farm losses would be entered into the account only to the extent that they exceeded $25,000.

In 1964 there were about 18,000 tax returns showing nonfarm adjusted gross income in excess of $50,000. About 3,000 of these taxpayers turned a farm profit with the balance reporting losses. Thus only about 15,000 farm returns showing farm losses meet the outside income test. Yet in the same year, there were about 1,109,000 farm returns (out of 3,000,000) showing a farm loss. As a consequence, the Bill would affect less than 0.5 percent of all farm returns and less than 1.5 percent of farm returns showing a tax loss.[92] This relatively insignificant impact will be even further reduced by the exception of any loss, or part thereof, that does not exceed $25,000. The fairest guess seems to be that the proposal might have some impact on as many as 4,000 or 5,000 tax returns.[93] The revenue estimate for the long run is $20 million.[94] This compares with a revenue estimate of $50 million for the Treasury's recommended EDA[95] and $205 million if the Metcalf Bill were enacted.[96] The Treasury's proposal might have reached as many as 75,000 returns in any year,[97] while the Metcalf Bill would have reached around 14,000 taxpayers,[98] about the number of returns which meet the nonfarm adjusted gross income test under the Bill, but with an impact over ten times as great when revenue estimates are considered. These comparisons strongly suggest that H.R. 13270 would reach only the visible portion of the iceberg.[99]

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92 *See* TAX REFORM 1969, at 5428, 5430 (Office of Secretary of the Treasury, Office of Tax Analysis, General Explanation of Farm Proposals, Tables 1 and 3).

93 U.S. TREASURY DEPARTMENT (unpublished tabulation of statistics on income).

94 H.R. REP. No. 91-413 (Part I), 91st Cong., 1st Sess. 16 (1969).

95 TAX REFORM 1969, at 5058.

96 115 CONG. REC. 9898 (daily ed. Aug. 13, 1969) (remarks of statistics of Senator Metcalf).

97 U.S. TREASURY DEPARTMENT (unpublished tabulation of statistics of income).

98 TREASURY STUDIES 158. The proposal put forth by the Treasury Department in this document should reach about the same number of taxpayers as the Metcalf Bill. The estimate is 14,000 returns.

99 The Treasury Department has estimated that the special accounting rules cost about $800 million annually. *Hearings on the 1969 Economic Report of the President before the Joint Economic Comm.*, 91st Cong., 1st Sess. 36 (1969) (supplementary statement of Joseph W. Barr). If the revenue raised under these alternatives then is an index of effectiveness, the House Bill would be 2.5% effective; the Treasury's EDA would be 6.25% effective; and the Metcalf Bill would be just over 25% effective.

Several averages may be derived from 1964 figures published as Table 3 to the General Explanation of the Treasury's Farm Proposal. TAX REFORM 1969, at 5430. The raw data presented there are:

(a) All tax returns showing more than $50,000 nonfarm adjusted gross income with a farm loss numbered 14,325 with aggregate farm losses of $369,605,000, an average of $25,800. If we assume a 50% marginal tax bracket, the average farm loss has an average value of

The amount of revenue raised and the number of taxpayers affected are not, of course, the important criteria by which to measure a provision dealing with the farm loss problem. The question is whether the proposal will significantly reduce the federal subsidy going to taxpayers having both (a) certain kinds of farm investments and (b) substantial nonfarm income while providing relatively insignificant benefits to those who do not have the nonfarm income. The overall purpose thus is to discourage some investments in farm assets by improving the equity of the tax structure. On this ground, the Bill passed by the House seems destined to fail. It will permit all comers to incur tax losses up to $25,000 each year. An investment of this size may have substantial capital gain possibility.

Finally, the purpose of restricting the operation of the Bill to those taxpayers having a coincidence of $50,000 in nonfarm adjusted gross income and a farm loss in excess of $25,000 is not clear. It seems unlikely that a "legitimate farmer" cannot be more precisely defined. Thus the high dollar limits seem not to have a definitional purpose. Nor is the abuse limited to taxpayers having this happy combination of circumstances. But even if it were, under the Bill, they are permitted to exclude from the EDA the first $25,000 of farm loss each year. Since the justification for these limits is not immediately apparent and since the Bill does not appear altogether effective, it seems likely that Senator Metcalf will continue to press his solution, and the issue will be joined in the Senate.[100]

$12,900. If ultimately there are capital gain sales equal to the average farm loss, the taxes paid would be $6,650 under the Bill while under present law the taxes would be $6,450. Thus the Bill on the average would remove but $200 of the tax subsidy. This amount of reduction would hardly discourage anyone because the tax subsidy is over thirty times the recaptured tax.

(b) The above figures could be broken down into nonfarm adjusted gross income categories as follows:

$50,000 to $100,000 nonfarm adjusted gross income:

10,036 returns showing an average loss of $16,487. On the *average* the Bill would have no effect.

$100,000 to $1,000,000 nonfarm adjusted gross income:

4,204 returns showing an average loss of $46,908. If we assume a 65% tax rate (maximum under the Bill), the loss would have a current value of $30,490 on the average. If there were ultimately capital gains equal to the loss, the taxes incurred giving effect to EDA would be $22,365 leaving a negative tax benefit of $8,125. Again this is hardly sufficient deterrent to be effective.

Over $1,000,000 nonfarm adjusted gross income:

85 returns showing an average loss of $81,576. Again assuming a maximum rate of 65%, the loss would have a current value of about $53,000. Ultimately taxes of nearly $45,000 would be paid if EDA were fully effective. Again there is something less than full recovery of the tax subsidy, and the deferral benefit remains.

100 115 CONG. REC. 4354 (daily ed. May, 1969) (remarks of Senator Metcalf). In a press release, dated October 17, 1969, the Senate Finance Committee announced that it

Regardless of the outcome, there would appear to be some learning here that may be applicable beyond the farm field. We noted at the beginning that other industries such as oil and gas, real estate, and timber may offer much the same opportunity for tax avoidance as does investment in some farm assets. The benefits in these areas are also predicated upon premature and excessive deductions, and repair of the tax law in these areas is badly needed.

The foregoing analysis is helpful in suggesting guidelines and means of testing those solutions that may be put forward for these other areas. The problem must be precisely identified to expose the source of the difficulty. At that juncture, two paths will be offered. The problem may be attacked frontally as, for example, proper cost capitalization attacks the farm loss problem. If that route is not chosen and if excessive deductions are the problem, there are two means of dealing with them. First, the deductions may be blessed when claimed with a recapture of them at a later time. The other is to operate directly on the deduction by limiting its benefit either to a specified group or in a specified amount. Either means is complex, but there would seem to be no question but that the former, a recapture of prior excessive deductions, is a most inappropriate way of dealing with excessive deductions. Thus, unless all other techniques are exhausted and rejected on some more fundamental ground, the concept of recapture should not be raised as a solution.

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had decided to disallow one-half of the farm loss in excess of $25,000 in those cases in which the nonfarm adjusted gross income exceeded $50,000, and the farm loss exceeded $25,000. This approach is at best a very poor substitute for Senator Metcalf's Bill. While the press release is not entirely clear, apparently there is no effort to confine the disallowance to losses created by the special accounting rules. The income and loss limits are still excessive. It does, however, take a step in the right direction by disallowing losses. At this writing, estimates of revenue and the number of taxpayers affected are not available.

Farm Losses Under the Tax Reform Act of 1969: Keepin' 'em Happy Down on the Farm

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FARM LOSSES UNDER THE TAX REFORM ACT OF 1969: KEEPIN' 'EM HAPPY DOWN ON THE FARM

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When neither the Treasury Department nor the American farming industry was highly sophisticated, the Treasury Department made a number of decisions which continue to plague us today, and which have led to certain well-publicized abuses in the farm tax area. During the last session of Congress, there appeared, for the first time, some hope that Congress would take positive action to correct these abuses. In view of the 1969 legislation, however, one has the feeling that the farm tax loss problem is somewhat like the problem of the poor: it may be with us always. The purpose of this article is to analyze the Tax Reform Act of 1969[1] as it affects farm losses, and to demonstrate that it provides little overall reform in the farm tax loss area.

I. THE PROBLEM

The tax problem in the farm industry is the result of early administrative decisions which prescribed different accounting principles for farming and nonfarming operations. Farmers are permitted to expense items which are capital items under commercial accounting principles, most notably, items such as the cost of raising livestock[2] and costs involved in the pre-operation stage of orchards and ranches.[3] In addition, farmers may use the cash method of accounting and ignore year-end inventories as well as payables and receivables,[4] although one could hardly convince an accountant that these techniques lead to a clear reflection of income. In either case there is a deduction of costs before the income produced by them is realized. If there is other income to absorb these premature deductions, the resulting tax savings return a large part of the taxpayer's cost to him before he makes a sale of the goods produced. He is thus treated more favorably than other taxpayers who must await a disposition of property before deducting costs. This favorable treatment is aggravated by

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1 P.L. 91-172, 91st Cong., 1st Sess. (1969) [hereinafter cited as the Act or, the 1969 Act].

2 T.D. 2153, 17 Treas. Dec. Int. Rev. 101 (1915), as amended by T.D. 2665, 20 Treas. Dec. Int. Rev. 45 (1918).

3 Treas. Regs. 45, art. 110 (1917). Treas. Regs. 33, art. 4 (1917), required these costs to be capitalized.

4 Treas. Reg. § 1.61-4 (1957); § 1.471-6 (1958).

permitting the proceeds from the sale of many farm assets to be reported as capital gain, most notably proceeds from sales of livestock culled from breeding herds, and orchards.[5] These problems have been extensively discussed elsewhere,[6] and it seems unnecessary at this juncture to do more than note their operations under pre-1969 rules. The effect of the 1969 Act is considered later.

The pre-1969 rules conferred substantial tax benefits upon certain farm investments. In some cases, the tax benefits exceeded economic losses and, thus, made profitable those operations which, absent the tax savings, were economically unsound.[7] In other cases, depending in large measure upon the amount of income earned in other endeavors, the rules conferred a substantial subsidy upon economically profitable operations. For example, a taxpayer using the cash method of accounting might have incurred expenses of $200,000 in raising a breeding herd. If he were in the 70 percent tax bracket, the current deduction of these expenses would have produced a tax savings of $140,000. The herd, of course, would have a zero basis because the cost of raising had been entirely deducted, and upon its sale, the entire sale price, including the recovery of the expenses of raising the herd, would be taxed only at capital gains rates. If the taxpayer had sufficient income to qualify for the alternative tax under Section 1201 of the Code, prior to amendment by the 1969 Act, the resulting tax rate would have been 25 percent, giving a tax of $55,000, or less than one-half of the $140,000 tax savings realized from the deduction of the raising costs. Thus, the taxpayer who realized an economic profit of $20,000 would also have a net benefit from the government in the form of a reduction on taxes on other income in the net amount of $85,000. Obviously, a taxpayer who enjoyed this kind of largess would be likely to begin the cycle anew by starting a new breeding herd which would later be sold at capital gains rates.

Similar advantages were available to developers of citrus groves, and are still available to those who develop fruit orchards and vine-

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[5] Int. Rev. Code of 1954, § 1231, and Albright v. United States, 173 F.2d 339 (8th Cir. 1949). References to section numbers are to the Internal Revenue Code of 1954 unless otherwise noted.

[6] Hawkinson, Farm Expenses and General Accounting Principles, 22 Tax L. Rev. 237 (1967); Hjorth, Cattle, Congress, and the Code: The Dangers of Tax Incentives, 1968 Wis. L. Rev. 641 (1968); Allington, Farming as a Tax Shelter, 14 So. D. L. Rev. 181 (1969); Davenport, A Bountiful Tax Harvest, 48 Texas L. Rev. 1 (1969); House Comm. on Ways and Means and Senate Comm. on Finance, Tax Reform Studies and Proposals of the U.S. Treasury Dep't, 91st Cong., 1st Sess. 151 (1969) [hereinafter cited as Treasury Studies]; Hearings on Tax Reform Before the House Comm. on Ways and Means, 91st Cong., 1st Sess. 5047 (1969) [hereinafter cited as Tax Reform 1969]; and Pitcarin and Chandler, Tax Advantages of Cattle Operations, 1 P.H. Tax Ideas ¶ 17,013 (1968).

[7] See Treasury Studies, supra note 6, at 154.

yards.[8] The assets involved require several years to mature and, during the pre-operation period, the development costs such as water, fertilizer, cultivation, pruning and spraying may be deducted as ordinary expenses of the business.[9] When the operation reaches the stage where it is ready to begin producing a profitable crop, the asset may be sold in a transaction which qualifies for the lower capital gains tax rates.

In recent years, these attractive tax features have been literally packaged and sold.[10] Whatever may have been the purpose of these rules in the beginning, it would seem obvious that they were not intended to permit the widespread sale and syndication of tax benefits arising from farm tax accounting rules. This belief apparently was shared by both the House Ways and Means Committee and the Senate Committee on Finance when the 1969 Tax Reform Act was under consideration. Yet, it is doubtful that the provisions of the Act which deal with the farm loss problem will constitute more than a half-step in the direction of correcting abuses in some few instances.

II. Possible Solutions[11]

A. *A Change in Accounting Rules*

The solution which would have been most effective but which had no active sponsor, other than in academic circles,[12] was the revocation

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[8] The Act added § 278 to the Code providing that certain development costs with elation to citrus groves must be capitalized. The section does not extend to non-citrus rchards or vineyards.

[9] In An Analysis of Orchard Development Costs, (University of California Agricultural Extension Mimeo, 1968), Mr. A. Doyle Reed estimates the development cost (exlusive of land, tree, and planting costs) at $1,255 per acre for almonds; $1,745 for pples; $1,233 for apricots; $2,401 for pears; $4,395 for avocados; and various other rices for other plants. These amounts apparently would have been deductible before the ax Reform Act of 1969.

[10] See, e.g., an advertisement by Citrus Investments, Inc. in the February, 1968 sue of Air Line Pilot reprinted at 114 Cong. Rec. 29594 (1968) at the request of Senator etcalf. See also the offering brochures of Ceres Land Co., Black Watch Farms, Inc., ight Bells Angus, Inc., Chateaubriand, Inc., Oppenheimer Indus., Inc., and others.

[11] From time to time a number of solutions to the farm loss problem have been ggested, but at this point only three of them merit discussion. Without attempting to e exhaustive, some of the other proposals might be noted. There was a bill introduced y Senator Miller of Iowa, S. 1560, 91st Cong., 1st Sess. (1969), reprinted at 115 Cong. ec. 6395 (1969). This bill would have limited the farm deductions of nonfarmers to rm income except in the case of an individual whose principal residence is on a farm. n such case, the limit on farm deductions would have been the total of (a) farm income, b) wages and salaries, (c) timber income, and (d) royalties derived from farm property. farmer would have been entitled to claim all of his farm deductions. A farmer was efined as a taxpayer whose net income from farming for the three preceding years qualled two-thirds of his total net income for such years. For this purpose, net farm come included the full amount of gain on the sale or exchange of assets. Total income, owever, excluded all such gains except those incurred on farm assets. Certain deductions ere not disallowed even though attributable to the farm. These included deductions

of the right of farmers to use the cash accounting method and to deduct capital expenditures. This course might also have included the denial of capital gain on the sale of certain farm assets. This solution was never proposed as a bill. With the exception of the capital gain

arising from (a) casualty and weather conditions, (b) experimental farming, and (c) egg or broiler operation. Also, farms acquired from decedents, or by foreclosure, or operated by an estate would have been excepted for limited periods. Provisions were made to consolidate sole proprietorships with partnerships and subchapter S farm income and losses.

The bill had many weaknesses. First, it raised difficult definitional problems. What is a principal residence? What is a farm on which the principal residence must be located? This differs radically from the problem of defining farm income and expense—a feature common to many proposals. Second, a farmer could continue to offset nonfarm income, e.g., wages, by farm losses. A nonfarmer could also do so if he lived on a farm. There would appear to be no policy supporting this exception. Third, the sponsor conceded that the definition of "net farm income" and "total income" are designed to prevent, at least to some extent, application of the bill to livestock—probably the worst abuse. See Tax Reform 1969 at 2003-004, (remarks of Senator Miller). Fourth, the definition of a farmer depended on a new concept of farm income which is not the same as that set out for the filing of a declaration of estimated tax. Thus, a new category of farmers would have been created. Fifth, this approach was not directed toward either one of the causes of the farm loss problem, i.e., capital gain and simplified accounting rules. Its effect thus would be difficult to predict.

For another approach to the problem, see Sweeney, The Farm Loss Deduction, 53 A.B.A.J. 447 (1967). Sweeney advocated amending § 165 to disallow farm losses unless there was a reasonable expectation of profit. Five consecutive loss years would be considered proof that the expectation was not reasonable, in absence of clear and convincing evidence to the contrary.

This solution is technically deficient since there is no statutory definition of a farm "loss," and the "loss" arises usually because § 162 deductions (not § 165) exceed ordinary income. It is also premised on the belief that the farm loss problem may be one of "hobby losses." The suggestion is rejected in a reply article: Dickinson, The Farm Loss Deduction: A Reply, 53 A.B.A.J. 1111 (1967). See also Hjorth, supra note 6, at 644, 670, where the author proposed a § 1245 recapture and denial of § 1231 treatment in the absence of a failure to capitalize growing costs. This proposal does not reach citrus groves, although it could be so broadened. It also raises accounting problems and presents problems similar to those which are presented by the excess deduction account, the approach taken in the 1969 Act.

See also the letter from the National Livestock Committee, Tax Reform 1969, Hearings Before the House Comm. on Ways and Means, 91st Cong., 1st Sess. at 2056, 2059-060 which suggests a § 1245 recapture and lengthening of lives for an asset to qualify under § 1231. As is demonstrated in attachments to the letter suggesting this approach, considerable tax subsidy remains. This proposal must, therefore, be adjudged largely ineffective.

It has been suggested that all livestock sales be reported as ordinary income. While that approach would be helpful, it would not handle the overall farm loss problem. First, such treatment would not reach citrus groves, the do-it-yourself averager, the special deductions under §§ 175, 180, and 182, nor the "hobby" farmer in many cases. Second, from a conceptual viewpoint, without considering the deferral benefit, EDA is the equivalent of a forced capitalization of costs which permits only the actual economic profits to be reported as capital gain. Thus, treating all livestock sales proceeds as ordinary income would be going just one step further and requiring the economic profit to be taxed as ordinary income. This approach might be a step in the right direction, but it does nothing to reduce the benefit of the deferral although it would obviously reduce the net difference between the benefit of deferral and the detriment of the tax.

[12] See Hawkinson, Hjorth, Allington, and Davenport, supra note 6.

aspect, it apparently could have been promulgated by the Treasury Department in response to a suggestion by the Supreme Court.[13] The Treasury Department, however, had apparently rejected this answer in 1969, and had begun a search for other solutions.

Failure to take this step appears to be based upon both political reasons and alleged practical problems.[14] Since the practical problems are not insuperable,[15] the justifications offered for not proposing revised accounting rules appear to be mere rationalizations rather than valid reasons supporting inaction. Although this solution to the farm loss problem was not chosen, it remains available as the preferable alternative to other possible methods, including, in particular, the method actually chosen in the 1969 Act.

B. *The Denial of the Right to Deduct Farm Losses*

The first indication that the Treasury Department had seriously considered legislative solutions to the farm tax loss problem appeared in a letter to the Chairman of the Senate Finance Committee on July 11, 1968.[16] Senator Metcalf of Montana had introduced a bill in the 90th Congress which would have denied some taxpayers the right to deduct farm losses.[17] In commenting upon the bill, the Treasury Department suggested that it be modified so as to place a limitation upon the amount of farm loss that any nonfarmer could claim, so long as he did not affirmatively elect specified accounting procedures which would have eliminated most farm loss problems. This suggestion was reflected in another bill[18] introduced by the Senator in late 1968 which was carried over to the 91st Congress as S. 500.[19] Essentially, the bill provided that a taxpayer having more than $15,000 of nonfarm income would be denied the benefit of deducting his farm loss from other income unless he chose to compute the farm loss under accounting methods which require capitalization of costs.

The theory of the Senator's bill seems to have been that the simplified accounting rules should be preserved for the "real" farmers, and that such a farmer could be defined by his lack of income from nonfarm sources. If nonfarm income was above a substantial level,[20] there was reason to believe that the particular farming operation was engaged in for the purpose of offsetting nonfarm income with the farm

[13] United States v. Catto, 384 U.S. 102 (1966).
[14] Id. at 110-11 and n.15; see also Allington, supra note 6, at 203-04.
[15] See Davenport, supra note 6, at 14-19.
[16] Reprinted at 114 Cong. Rec. 21705 (1968).
[17] S. 2613, 90th Cong., 1st Sess. (1967).
[18] S. 4059, 90th Cong., 2nd Sess. (1968), reprinted at 114 Cong. Rec. 27562 (1968).
[19] S. 500, 91st Cong., 1st Sess. (1969).
[20] The bill chose $15,000 as the level at which to commence the disallowance of farm losses. 114 Cong. Rec. 27562 (1968).

loss. Or. even if the farm operation were not engaged in merely for balancing purposes, the tax benefits of farm losses created by the farm tax accounting rules were so great at high income levels that these benefits should be denied. The first conclusion was amply supported by data which demonstrated that as income from nonfarm sources grew, taxpayers had a remarkable propensity to run farm operations at a loss despite the fact that they ran their other businesses at a profit. It seemed unlikely that such individuals engaged in farming and actually lost money through mismanagement or bad investment decisions. Rather, in view of the extensive literature explaining the tax benefits to be reaped from the farm accounting rules, it seemed more likely that wealthy taxpayers were investing in farm assets because of the tax savings available. It thus seemed correct to limit the loss such taxpayers could claim.[21]

A similar approach was suggested by the Treasury Department itself in *Treasury Studies*, published shortly after the Johnson Administration departed Washington.[22] By that time, Senator Metcalf had obtained the support of numerous Senators and Congressmen,[23] in addition to that of the National Farmers Union, the National Grange, and the American Farm Bureau Federation.[24] The opponents of Senator Metcalf appeared mainly to be those having a vested interest in the payment and receipt of the federal subsidy provided by the farm tax accounting rules.

C. *The Excess Deductions Account*

For reasons which have never been completely articulated, the newly-arrived Nixon Administration endorsed neither the approach of the *Treasury Studies* nor that put forth by Senator Metcalf. Instead, it offered the excess deductions account (EDA), a new version of the 1963 proposal of the Kennedy Administration.[25] In general, the proposal might be called a recapture proposal. Recapture proposals do not disallow deductions; rather excessive deductions are allowed, and sales proceeds are then treated as ordinary income to the extent of the "recapture." The Administration proposal thus made no suggestion that deductions be curbed. Instead, it would have required some proceeds realized on the sale of some farm assets to be returned as ordinary income, even though the gain otherwise qualified for capital gains

21 See data presented in Treasury Studies, supra note 6, at 154.

22 Treasury Studies, supra note 6.

23 See 114 Cong. Rec. 28790 (1968).

24 See their statements before the House Comm. on Ways and Means, Tax Reform 1969, at 2007, 2016, and 2168, respectively. Many other farm organizations also supported Senator Metcalf's Bill.

25 The President's 1963 Tax Message, 88th Cong., 1st Sess. 144-45 (1963) [hereinafter cited as the President's 1963 Tax Message].

treatment under section 1231.[26] This proposal seems to have been founded on the philosophy behind sections 1245 and 1250[27] that since a deduction has been taken against ordinary income, gain thereafter realized is more than likely produced by that deduction, and simple equity requires that it be reported as ordinary income rather than capital gain.[28]

While recapture thus has a simplistic appeal to the emotions, it overlooks the value of being able to defer the payment of taxes through improper current deductions.[29] Furthermore, the appeal of recapture also lays bare its major weakness: it is accepted as being fair because a mistake has been made. The taxpayer has taken a deduction to which, in all fairness, he is not entitled. If the mistake is one of accident, recapture perhaps can be justified as a proper remedy. However, if the deduction is one which is clearly improper when taken, as is often the case in the farm area, the cure is not to recapture the prior deduction, but rather, to eliminate those provisions which allow the deduction.

Despite this logic, and in face of the substantial support that Senator Metcalf's bill received, the new Administration opted to propose EDA. Although this decision probably was based, at least in part, upon political considerations,[30] from time to time other explanations of the scuttling of the Metcalf Bill have been offered. The bill was labeled discriminatory because it allowed a taxpayer having more than one farm operation to offset profits from one against losses from the other It was thus said to prefer farm income over nonfarm income. EDA, however, offers no improvement in this regard, because the same offsetting of gains from one farm operation against losses from another

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[26] Under § 1231, gains from property used in the trade or business, as defined in § 1231(b), which is held more than six months may be reported as capital gain if there is a net gain on all transactions as a whole described in that section. If there is a net loss, the losses are treated as ordinary losses.

[27] Sections 1245 and 1250 apply to some dispositions of depreciable property and contain formulae under which gain, which absent these sections would fall under § 1231 and be reported as capital gain, must be reported as ordinary income.

[28] See S. Rep. No. 1881, 87th Cong., 2nd Sess., reprinted in Internal Revenue Acts Amendatory of the 1954 Internal Revenue Code Beginning 1961 at 812.

[29] The value of mere deferral of taxes is indicated by transactions such as large prepayments of interest. Seemingly, the most abusive features of this practice were curbed by Rev. Rul. 68-643, 1968-2 Cum. Bull. 76 (1968).

[30] Even though his support was bipartisan, Senator Metcalf's approach had become somewhat "Democratic" when the Johnson Administration's Treasury Studies had suggested a very similar technique. Furthermore, the vast bulk of President Nixon's tax program was merely a re-write, sometimes with a new wrinkle or two, of parts of the Treasury Studies, and undoubtedly there was some desire to differentiate at least part of the President's proposals from those appearing in Treasury Studies. Here was a highly visible area where a change could be made. Also, the Metcalf plan had aroused considerable opposition, and by not supporting it, the Treasury could appear somewhat responsive to the concerns of those opposed to Senator Metcalf's Bill.

farm operation occurs under it.[31] A further argument was made that the Metcalf approach might arbitrarily deny deduction of economic losses. EDA was regarded as being better because it waited until there was gain to have any effect at all. This claim is somewhat misleading because an economic loss was deductible under the Metcalf Bill if the farmer used the accounting method prescribed in the bill, that is, that applicable under accepted accounting principles.[32] Thus, an economic loss would have been denied deduction only if the taxpayer ascertained that retention of the cash basis method of accounting was worth more than the deduction. Certainly a taxpayer who foregoes his loss to retain the benefit of cash accounting merely supplies the linchpin for the assertion that cash accounting is much too generous. At the very least, one cannot waste many tears on his plight.

The excess deductions account thus became the major plank in the farm aspects of the tax program. As originally proposed, it would have required all farm losses to be entered into the EDA account to the extent they exceeded $5,000 in any one year. It emerged from the House Committee on Ways and Means, however, in quite different form.[33] There was to be no addition to the EDA account except to the extent that the farm loss exceeded $25,000, and this addition was made only if the taxpayer had nonfarm adjusted gross income in excess of $50,000. Thus, by the time the proposal was in bill form it had been so seriously weakened as to be rendered wholly ineffective. It was enacted by the House in this form.[34]

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[31] See Davenport, supra note 6, at 29.

[32] S. 500, 91st Cong., 1st Sess. (1969).

[33] H.R. Rep. No. 91-413, 91st Cong., 1st Sess., pt. 1, at 66-68 (1969).

[34] See 115 Cong. Rec. H7151 (daily ed. Aug. 7, 1969). Responsibility for the emasculation of EDA is difficult to assign. First, however, we should note that in its original form, it had only one proponent, the Treasury Department. Those who desired some change had generally endorsed Senator Metcalf's proposal. Thus, EDA had few defenders, and quite clearly there was considerable opposition to any change in the tax law. The injection of EDA made it much more difficult, probably fatally difficult, for those desiring effective action to close ranks and concentrate on the opposition to reform. EDA made it a three-way contest, and thereby handed the advantage over to the opponents of any reform. This opposition did not immediately show itself. At the time of the hearings before the Ways and Means Committee on March 10, 1969, the opposition appeared to be much the same as that which had blocked any action in 1963, i.e., representatives of cattle raisers, includings some who syndicated breeding herds. On April 22, 1969, the President's proposals, including EDA, were made public. In August, the House passed H.R. 13270 containing the EDA proposal, and at the time of the hearings before the Senate Finance Committee on September 22 and 29, 1969, these opposition forces had been considerably augmented by representatives of horse breeders—including one governor, two former senators, one former governor, a college president, one commonwealth, and others.

Although representatives of the horse industry had not appeared at the hearing before the Ways and Means Committee in March, its representatives apparently had made their case effectively because the provision which requires horse racing to be treated as a part of horse raising if the taxpayer engaged in both was contained in the bill as

In the Senate, the horse raisers joined forces with the cattle industry to forecast financial chaos if the farm tax laws were changed. After hearings, however, the Finance Committee rejected EDA and inserted a provision which would have limited the deductibility of farm losses.[35] While this was also overly liberal, it at least was a step in the right direction. In conference, however, the House Conferees prevailed, and EDA became part of the 1969 Tax Reform Act.

III. The Provisions of the Act

Subtitle B of Title II of the Tax Reform Act of 1969 is devoted to farm losses, etc. The *et cetera* is far broader than one would expect, and there are six provisions which deal with varying aspects of the farm loss and other problems. This welter of legislation might lead one to conclude that the problem to be handled was complex. But, as outlined above, the problem is simple: *the tax law permits premature deduction of capital costs and confers capital gain on some of the income so produced.* This simplicity somehow gets lost in the maze of provisions which Congress enacted. Indeed, the major difficulty in discussing "farm tax reform" enacted by Congress is that one must not permit the complexity and diversity to obscure the central thrust of the reform. With this goal in mind, the discussion below is separated into two parts, one discussing all of the provisions except the excess deductions account, and one devoted solely to the excess deductions account.

A. *Thrashing About the Problem: Miscellaneous Provisions*

1. *The Depreciation Recapture Provision*

When Section 1245 was added to the Internal Revenue Code in 1962, livestock was specifically excluded from the definition of Section

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it came from Ways and Means. This is a favorable provision because many large racing stables have racing winnings, but at the same time, due to the farm accounting rules, show tax losses, but not true economic losses, from the breeding operation. Thus, the breeding loss will be diminished by the racing winnings, and only the balance will be available to enter into EDA. Although many racing stables appear to operate at a true loss, the pattern described above is applicable to most large racing stables that are also engaged in breeding. See note 66 infra. Since the horse breeders were able to gain this concession, it seems likely they also had some influence in shaping EDA within the committee. It also seems likely that Congressman John Watts of Kentucky, the third ranking Democrat on the Committee, was in a position to be a strong advocate of their position. In any event when EDA as proposed by the President was considered by Ways and Means, it was first amended to be applicable only to so much of the farm loss as exceeded $25,000 and then only if the nonfarm income was in excess of $50,000. One can only surmise that an amendment of this nature was strongly supported by both the horse raising and the cattle raising industries. Following this amendment, on a motion made by Representative Watts, even this weakened version of EDA was rejected by Ways and Means. Subsequently, with the switch of a single vote, EDA was reconsidered and made a part of the bill.

[35] S. Rep. No. 552, 91st Cong., 1st Sess. 97 (1969).

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1245 property.[36] At the same time, the investment credit was denied for the purchase price of livestock.[37] Section 212 of the Act corrects this omission by including livestock under Section 1245 of the Code.[38]

Since most livestock is not depreciated,[39] this amendment will not have widespread application. Despite the narrowness of impact, it seems generally correct to bring livestock to a parity with other personal property. Furthermore, despite the doubtful legality of the practice,[40] there were some syndications of breeding herds which relied in large part on unrealistic depreciation deductions followed by a realization of capital gains.[41]

2. *Holding Period*

Section 212(b)(1) of the Act amends Section 1231(b)(3) of the Code. Under prior law, draft, breeding, and dairy livestock could qualify as property used in the trade or business only if held by the taxpayer for 12 months or more. As amended, cattle and horses will qualify only if held 24 months or more from date of acquisition. All other livestock would continue to qualify as property used in the trade or business if held for draft, breeding, dairy or sporting purposes for more than 12 months from the date of acquisition. As with the present law, livestock does not include poultry.

The purpose of this provision is to deny capital gains treatment to a substantial amount of the sales proceeds of cattle and race horses which formerly received capital gains treatment. The return of these proceeds as capital gain is part of, but not the major aspect of, the farm loss problem. Furthermore, it is not clear that this provision will prove effective.[42] Thus, while this amendment is a definite improve-

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[36] Int. Rev. Code of 1954, § 1245(a)(3).

[37] Int. Rev. Code of 1954, § 48 (a)(5).

[38] The exact trade-off in the 1962 legislation is not clear. However, most livestock is raised, not purchased. Thus, the investment credit would have meant little to the industry. Similarly, § 1245 recapture, apparently affecting the same taxpayers and animals as would the credit, would have had little effect on the industry. If the industry forewent the credit to avoid recapture, elimination of the credit removed the consideration for its side of the bargain and argued strongly for the application of recapture. On the other hand, if the industry was denied the credit and then exacted lack of recapture as a recompense, simple equity would require the inclusion of livestock under § 1245 once the credit was eliminated. But does not this type of consideration suggest that § 167(f) should also apply to livestock?

[39] Most livestock has no basis because it has been raised by the taxpayer and the costs of raising were deducted. In cases where livestock has been purchased or the raising costs have been capitalized, there is a basis which may be depreciated.

[40] See Davenport, supra note 6, at 10 n. 27(d).

[41] See, e.g., the offering brochures of Black Watch Farms, Inc., Wappinger Falls, New York, discussed in the Wall Street Journal, March 21, 1969, at 2.

[42] For example, it seems likely that a good part of the sales of raised horses under two years of age is now reported as ordinary income. Note also that Treas. Reg. § 1.1012-1(c)(1) (1969) requires that shares of stock not otherwise identifiable be costed out on

ment, it does not in any way handle the farm loss problem. The truth of this assertion is explored later.

3. *Like-Kind Exchanges*

Section 1031 was amended to provide that livestock of different sexes is not property of a like kind.[43] Although such a provision was not in the House bill, the problem presented was discussed at length in the House Report.[44] The committee said:

> The importance of [the exchange] arises from the fact that ordinarily the ratio of males to females in a calf crop is approximately 50-50. Since few males are normally retained in a typical cattle operation, the remaining male calves are castrated and sold as steers at ordinary income rates. If a tax-free trade of male calves for female calves were allowed, a breeding herd of females could be built up more quickly without tax consequences.[45]

While the trading practice undoubtedly existed and was one of the selling points in some cattle operations, the amount of income deferred by this technique would not seem so great as to warrant the statutory amendment. Certainly, the committee believed that the law did not exempt the transaction, and even fairly reckless tax lawyers (never mind very cautious ones) probably would not have advised to the contrary. Thus, the statement in the report seemingly would have sufficed even though the Internal Revenue Service had not published a ruling to that effect.[46]

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a first-in-first-out rule. If the same rule were applied to cattle which may not be identified (and the livestock interests may claim that for animals two years of age or older identification is impossible), there would be little if any improvement in the reporting of sales proceeds as capital gains. (See Treas. Reg. § 1.1223-1(i) (1957) stating that the basis regulations of § 1.1012 apply in determining the holding period in this case.) Indeed, this may be a backward step because animals up to two years old may be identified, at least by age group. Hence, the holding period could at least be determined on a group basis. If animals two years of age or older may not be identified, will not the first-in-first-out argument be difficult to resist?

[43] Section 212(c) of the Act.

[44] H.R. Rep. No. 91-413, 91st Cong., 1st Sess., pt. 1, at 66 (1969).

[45] Id.

[46] Griffith and Joy, What the Act Does to the Farmer: Farm Parity or Class Discrimination?, 23 The Tax Lawyer 495 (1970), appear to criticize this provision because it taxes an exchange of a bull for a cow while continuing to permit deferral under § 1031 of an exchange of a farm for an oil well. This criticism may merely be one directed at overly broad drafting, or it may be one directed at allowing the farm to be exchanged for the oil well without tax consequences. This author thinks the first was intended. While the provision is perhaps broader than the problem, it is likely that the greatest number of exchanges affected will be those which Congress intended to reach, i.e., the exchange of a female calf for a male calf.

4. *Crop Insurance Proceeds*

Section 215 of the Act permits a cash basis taxpayer who receives insurance proceeds as a result of the destruction of a crop to include such proceeds in income for the taxable year following the year of destruction or damage, if he can establish that under his usual accounting method he would have reported the income from the crop in the later year. This amendment apparently will not affect many taxpayers even though it departs widely from the concept that the tax should be levied on money in hand when the money is received. Presumably, its purpose is to prevent the telescoping of two years of income into the year in which a crop is damaged, and in which proceeds from the prior years were also received. One need only note that the taxpayer does have the money in hand, and that the telescoping of the income is not all that serious under the averaging provisions of the Code,[47] particularly as liberalized by the Act.[48] Section 215 appears merely to be an unwarranted departure from the annual accounting concept, and as such is difficult to justify.

5. *Repeal of Section 270—The Hobby Loss Provision*

Section 270, prior to amendment by the 1969 Act, was a poorly designed section. It required a recomputation of income if a trade or business operated by an individual showed a $50,000 loss in each of five consecutive years. For this purpose, the size of the loss was computed without regard to certain "specially treated" deductions.[49] In the recomputation, $50,000 of the loss so computed was allowed, but all of the specially treated deductions remained fully deductible.

The Treasury offered some changes to section 270 which would have tightened it considerably.[50] Its operation even after those amendments would have continued to be erratic, however, and would have continued to apply regardless of the economic loss. The House Ways and Means Committee, apparently recognizing these weaknesses, rejected the Treasury's proposals and instead would have eliminated prior section 270 and replaced it with a new concept. Under the rule adopted by the House,[51] a taxpayer would not have been allowed to deduct losses or deductions attributable to or arising

[47] Int. Rev. Code of 1954, §§ 1301-1304.

[48] See § 311 of the Act.

[49] Int. Rev. Code of 1954, § 270(b).

[50] Tax Reform 1969, at 5183-186, 5425-426.

[51] H.R. Rep. No. 91-413, 91st Cong., 1st Sess., pt. 1, at 71 (1969).

[52] This apparently would have settled the dispute whether the taxpayer needed to be a reasonable person in expecting a profit in order to prove a business motive. The Ninth Circuit had stated, if not held, he need not be, in Mercer v. Commissioner, 376 F.2d 708, 710-11 (9th Cir. 1967).

from an activity carried on by him if the activity was not operated with a *reasonable*[52] expectation of realizing a profit. Whether there was a *reasonable* expectation of realizing a profit was a determination to be made on the basis of all of the facts and circumstances, but the Treasury Department in every case was to be assisted by a presumption. If the activity was carried on at a loss in excess of $25,000 in three out of five years, then, unless the taxpayer could prove to the contrary, the activity would be deemed to be carried on without a *reasonable* expectation of realizing a profit, and thus would be subject to the limitation.[53] While such a presumption could be criticized as unwise because it could penalize a number of businesses where true economic losses resulted, it at least could not be criticized on the grounds that it was creating a haven for a taxpayer's hobby operations. Before Congress was through, however, this latter criticism was also valid.

In apparent solicitude for taxpayers who suffered an unusual number of tax losses, the Senate reversed the presumption, and the Senate version of the bill prevailed in conference. The Act added a new Section 183 to the Code. It provides that deductions attributable to any activity not engaged in for profit, whether or not it involves farming, are allowable only to the extent of (1) deductions allowable without regard to profit motive, plus (2) the amount remaining after gross income derived from such activity has been reduced by the deductions allowed under (1). The category of deductions allowable without regard to profit motive presumably includes such deductions as taxes, interest, casualty losses and bad debts. If there is doubt about the profit-seeking motives, the *taxpayer* is aided by a presumption. If in any two or more taxable years in a period of five consecutive years the gross income from the activity exceeds the deductions attributable to such activity, then unless the *government* can show to the contrary, there is a presumption of profit seeking. For businesses consisting in major part of breeding, training, showing or racing of horses, the five-year period is extended to seven years. This liberality presents discrimination in favor of an industry which is allegedly particularly hazardous, but which would not appear to have either a high social or economic claim for special treatment.

While the Treasury previously had been largely unsuccessful in winning the hobby loss cases, this new tool will impose an even heavier burden upon it. Few taxpayers, whether in the farming business or any other, will fail to show at least one dollar of net income in 40 percent of their years. Furthermore, so long as the cash method of accounting is permitted for farm income and expenses, the tax-

[53] S. Rep. No. 552, 91st Cong., 1st Sess. 104-05 (1969).

payer can defer either the expenses or the income of one year to a later year and get a doubling-up effect. On the other hand, the taxpayer can anticipate expenses or income. If necessary, he can combine into a single year the deferred income of prior years, the current income, and anticipated future income while deferring all current expenses. Similar liberalities are available for expenses. It is thus nearly inconceivable that a farmer using the cash method of accounting cannot show at least one dollar profit in some two out of five consecutive taxable years. Thus, so long as the liberal cash accounting rules are permitted, each farm hobby loss controversy may be brought into the area covered by this proposal. Perhaps, on the whole, this effect will be beneficial. Efforts which are today devoted to auditing true hobby farmers are usually followed by losses in court. With an even greater burden imposed on the government, the Internal Revenue Service is likely to forego further hobby audits, and the effort thus conserved will be more productively spent in other endeavors. The necessity of finding such a justification for the hobby loss provision is, however, a very sad commentary on a tax reform act.[54]

6. *Gain from Disposition of Farm Land*

If the excess deductions account hereinafter described does not apply to the disposition of farm land, if the taxpayer has enjoyed deductions under sections 175 and 182[55] with respect to farm land, and if sale occurs before the taxpayer has held the land ten years, a percentage of these deductions is to be recaptured upon any disposition of the farm land.[56] Through the first five years, 100 percent of any deductions is to be recaptured. The percentage declines at the rate of 20 percent per year thereafter until such time as the land has been held ten years or more, when none of the deductions is to be recaptured. The ten-year period is measured by the holding period

[54] Neither is the hobby loss provision a model of clarity. Does "profit" mean a tax profit or an economic profit? Is the deduction for capital gains attributable to the activity? McDonald v. Commissioner, 214 F.2d 341 (2nd Cir. 1954), on remand, 23 T.C. 1091 (1955), acq., 1956-1 Cum. Bull. 4, holds that it is not, and the deduction would be allowable while including the whole gain in gross income for determining whether there is a profit. What is an activity? What is a "major part" of an activity for determining whether the five-year period applies? How is intent to be determined? Are years subsequent to the year in question to be counted? If there is a profit? If there is a loss? How does the presumption apply to years before 1970? Some of these questions are discussed in Diamond and Horne, Hobby Losses; Miscellaneous Individual and Corporate Problems, 23 The Tax Lawyer 609, 610-13 (1970).

[55] Section 175 allows a deduction for certain soil and water conservation expenses which are capital expenditures, and which would not be depreciable or otherwise deductible but for this section. Section 182 allows a very limited deduction for certain land clearing expenses.

[56] See § 214 of the Act which adds § 1252 to the Code, and in particular § 1252(a)(3).

of the land, not the period following the incurring of the expenditure under sections 175 or 182. For example, if land has been held for four years and ten months and if section 175 expenses were incurred at acquisition or soon thereafter, such expenses will be recaptured as ordinary income to the extent there is gain on sale of the land. On the other hand, if land has been held ten years, and if large section 175 expenses are incurred in anticipation of sale, the expenses are not recaptured on the sale of the land.

Little can be said in favor of this provision. It is another example of permitting the evil in the first place, and subsequently attempting to correct it by a recapture proposal. If the activity to be encouraged from the allowance of the deductions under sections 175 and 182 is actually beneficial, it is difficult to understand the theory behind recapturing these deductions if the land thus benefitted is sold within ten years of acquisition without reference to when the "evil" expenses were incurred. Provisions such as this, however, do serve one purpose. They reveal the fragile ground on which the entire notion of recapture is built.

7. *Capitalization of Certain Costs*

Although the farming industry in general will be largely unaffected by the new Act, the citrus industry appears to have had a partially correct, but highly discriminatory, rule prescribed for it. Section 216 of the Act adds a new Section 278 to the Internal Revenue Code. The section requires that all expenses incurred in connection with a citrus grove prior to the close of the fourth taxable year, beginning with the year in which the grove was planted, be charged to capital account. Plantings resulting from trees lost or damaged by reason of freeze, drought, disease, pest or casualty, or which were planted or replanted prior to the enactment of the section, are excepted from the capitalization rules.[57]

A bill containing somewhat similar provisions[58] was introduced as early as the 89th Congress, apparently through the efforts of the established Florida citrus growers, to deny new growers the advantage of writing off capital costs, a benefit of which the established growers presumably had availed themselves.

Since capitalization of development costs is a proper rule, one might think that the provision should be beyond reproach. Unfor-

[57] This may result in a double deduction in the year in which the loss occurs. The capitalized cost of a grove damaged by freeze, etc. will presumably be allowable. In addition, development costs after the new planting (but not planting costs) will be deductible. See Griffith and Joy, supra note 46.

[58] H.R. 9454, 89th Cong., 1st Sess. (1965), introduced by Representative Haley of Florida.

tunately, for several reasons it is not. First, it is not altogether clear what is encompassed within the meaning of citrus.[59] Also, since the preproduction cycle of all citrus is not uniform,[60] some citrus growers will be allowed to continue deducting the portion of the preproduction costs which extend beyond the fourth taxable year, including the year of planting. In addition to discriminating among various kinds of citrus, the blatant discrimination against citrus as compared to other kinds of groves, orchards and vineyards is indefensible. There is no reason why the grower of peach trees, English walnut trees or grapes should be preferred over the grower of citrus. In addition, there is no reason to treat the citrus farmer more harshly than the cattle farmer. One can only hope that the principle embodied in this provision will ultimately become the touchstone of farm tax accounting, and that proper capitalization will be required in all areas of the farming industry.

This brings us to the major provision in the farm loss area.

B. *Perpetuation of the Problem: The Excess Deductions Account*

The excess deductions account, the major provision of the 1969 Act, was first proposed in 1963,[61] but never emerged from any of the tax writing committees. In the form finally adopted in 1969, it is complex, almost beyond comprehension. In addition, it is a wholly ineffective measure which, unfortunately, does not even lay a foundation for further reform. Despite these objections, however, Congress adopted it.

Section 211 of the Act adds a new Section 1251 to the Code. It provides for the inclusion in gross income, as ordinary income, of gain[62] from the disposition of farm recapture property disposed of during taxable years beginning after December 31, 1969. The provision applies only if, and to the extent that there is either (a) "farm net loss" for the year, or (b) a balance in the excess deductions account

[59] For example, are kumquats within the citrus family? The Encyclopedia Britannica, vol. 13, at 508 (1966 ed.) states kumquats are of the Fortunella genus and were formerly placed under citrus japonica. Does this mean that kumquats are no longer citrus but something else? One might note that it is a strange provision of the tax law which drives one to the encyclopedia to determine whether an expenditure is deductible. But see proposed regulations which define citrus as belonging to the rue family. See proposed regs. § 1.278-1(a)(2)(ii) promulgated Nov. 11, 1970.

[60] See Reed, An Analysis of Orchard Development Costs, (University of California Agricultural Extension Mimeo, 1968) at 1, where it is estimated five to seven years depending on the kind of citrus involved.

[61] See The President's 1963 Tax Message, supra note 25, at 144-45.

[62] In the case of sales, exchanges, and involuntary conversions, gain is proper terminology. Gain may not, of course, be recognized (arguably not realized) on other dispositions. In those cases, the amount treated as ordinary income is the excess of fair market value over adjusted basis. The section thus is patterned on §§ 1245 and 1250, and the dispositions excepted from the recognition rule in those sections are also dealt with in § 1251.

t the end of the taxable year after reducing the amount in the account at the beginning of the year for any "farm net income" for the ear.[63]

A "farm net loss"[64] is the amount by which current deductions irections directly connected with the carrying on of the trade or business of farming exceed the gross income currently derived from the rade or business of farming for the year. Gains and losses from the disosition of farm property defined in section 1231 are not taken into ccount for the purpose of computing the farm net loss. Similarly, farm net income"[65] is defined as the amount by which current gross ıcome attributable to farming exceeds the current deductions atibutable to farming.[66]

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[63] The operations of EDA may perhaps be better understood by the use of an ample. The one which follows is Example 1 of the Treasury's proposals (See Tax eform 1969, at 5179-180) adapted to reflect the differences between the Act and the easury proposal.

The taxpayer, a corporate executive, earns a salary of $75,000 each year, and owns a rm with respect to which, in 1970, ordinary deductions exceed ordinary income by 0,000. In 1971, the farm produces net ordinary income of $5,000 and, in addition, a ize bull, which has a zero basis, is sold for $1,500 in a sale which would qualify for pital gains treatment unless EDA changes that result. In 1972, the farm shows a net ss of $3,500. In 1973, his ordinary farm income just equals farm expense, but he sells eeding livestock which he held more than two years, valued at $12,500 but without y basis.

The taxpayer's EDA would be computed as follows:

EDA

Year	Additions	Subtractions	Balance
1970	$15,000		$15,000
1971	0	$6,500	8,500
1972	0	0	
1973		8,500	0

This chart summarizes the following transactions: In 1970, the taxpayer enters 5,000 in the excess deductions account (the excess of the $40,000 loss over the $25,000 or). In 1971, the EDA is reduced by the net ordinary income from farming ($5,000). ıce the amount in the EDA is larger than the capital gain on the sale of the bull, the 500 income on the sale of the bull is treated as ordinary income. The EDA accordingly also reduced by the amount of capital gains treated as ordinary income ($1,500). At end of 1971, the EDA is $8,500. The loss in 1972 does not add to the account, hower, because the loss is less than $25,000. Thus, the account remains at $8,500. When the estock is sold in 1973, only $8,500 of the $12,500 gain is treated as ordinary income, d the balance of the gain is treated as capital gain.

It is interesting to note that if farm income is realized before there is a loss, the evious farm income does not prevent later losses from being entered in EDA. However, farm income realized after a loss will insulate the effect of that loss by eliminating equal amount in the EDA. Such differing tax treatment, depending wholly on timing income and expense, is at least questionable policy.

[64] Section 211(a) of the Act.

[65] Id.

[66] In both cases, the business of farming includes the racing of horses if the taxpayer also engaged in the raising of horses. This would appear to be another unwise concesn to the horse racing industry. Has this favoritism converted the "Sport of Kings"

An addition to an individual taxpayer's excess deductions account is made only in years in which the taxpayer has *nonfarm adjusted gross income* in excess of $50,000.[67] The amount added to the account in those years is only that portion of the net farm loss which exceeds $25,000.[68] The amount of the EDA at a given moment is the cumulative amount of the net farm losses of other years to the extent they exceeded $25,000 in any year in which the taxpayer had $50,000 of nonfarm adjusted gross income. Any balance in the account must be reduced by three amounts. It is first reduced by the amount of net farm income for the year. Second, there appears to be a statutory adoption of the so-called tax benefit rule.[69] The balance in the EDA is reduced by any deduction which did not yield a tax benefit (i.e., a reduction in tax) in the current or preceding tax year. Finally, the amount in the account is reduced by the amount of any gain for the taxable year which is converted from capital gain to ordinary income by reason of the EDA. This last reduction requires further explanation, that is, when does a conversion from capital gain to ordinary income occur?

Gain which may be converted is gain realized on "farm recapture property." Farm recapture property is property defined in section 1231(b)(1), (3) or (4), which is or has been used in the trade or business of farming by the taxpayer, or by the transferor to the taxpayer in a transaction under which some part of the excess deductions account is transferred to the transferee. Property is also included as

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into the "King of Sports"—at least taxwise? Some may argue that the aggregating of racing and raising of horses will not always work in favor of taxpayers because racing very often results in large losses which will increase the farm net loss. Obviously, this result may occur in a particular case. The overall pattern appears to the contrary, however. In most cases, racing is profitable to most taxpayers who are also heavily engaged in raising. In the majority of unprofitable racing cases, the horses appear to have been purchased horses. The consequence is that tax losses from raising horses will be offset against racing earnings and will not be available to convert gains realized on the sale of horses to ordinary income. This comment is not meant to imply that horse raising tax losses are in the usual case economic losses.

[67] Nonfarm adjusted gross income is adjusted gross income computed without regard to income or deductions attributable to farming.

[68] In the case of a husband and wife who file separate returns, each of these figures is reduced by one-half respectively. All corporate taxpayers (with the exception of a subchapter S corporation which has no shareholder who has a farm loss of his own) enter the entire amount of the loss into the excess deductions account even if there is no other income. If no shareholder of a subchapter S corporation has a farm loss of his own, the corporation is allowed the benefit of the individual taxpayer rules, i.e., additions are made to EDA only if nonfarm income is $50,000, and only to the extent the loss exceeds $25,000. See § 211 of the Act.

[69] See Dobson v. Commissioner, 320 U.S. 489 (1943). Under the "tax benefit" rule later recovery of an item previously deducted is included in income only if the deduction resulted in lowering the tax base, thereby lowering the amount of tax, and thereby yielding a tax benefit.

arm recapture property if its basis is determined by reference to the asis of farm recapture property. For example, if farm recapture roperty is exchanged tax free for other property under section 1031,[70] ne property received in the exchange has a basis determined by refernce to the basis of the farm recapture property given up, and the roperty received thus is farm recapture property.

. *Special Transfers*

As with sections 1245 and 1250,[71] section 1251 is generally acvated by any disposition of property. As with those sections, howver, certain dispositions are excepted from this general rule. Excepted ansfers present a problem because each exception provides an pportunity to separate the farm recapture property from the amount the EDA attributable to that property. If such separation occurs, ubsequent sale of the property will frustrate the purpose of the tatute because absent an EDA, the transferee probably will report ne sales proceeds as capital gain. For example, if a farmer raised a ow to maturity, incurring $250 of costs which he added to EDA, his ale of the cow at, say $300, would yield $250 of ordinary income and ossibly $50 of capital gain. If, however, he gives the cow to his son, e can assume that the sale proceeds will be treated as $300 of capital ain unless the statute has a special provision transferring some of the ather's EDA to the son. The gift then would permit the $250 of costs, educted by the father, to be converted to capital gain in the son's ands.

The same problem was faced when section 1245 and section 1250 ere drafted. In certain selected transfers under those sections, gain is ot recognized, but the potential recapture (i.e., the amount which ould be treated as ordinary income if sold) carries over to the transeree. Since EDA was also a "recapture" provision, logic seemed to ictate the same treatment for farm recapture property as is precribed for sections 1245 and 1250. This logic is deceptive, however. irst, the possibility of abuse resulting from the deduction of farm osses is greater than the abuse in many depreciation cases.[72] Second,

[70] Whether or not such an exchange is tax free is discussed below.

[71] Section 1245 "recaptures" excessive depreciation on most personal property. Seon 1250 does the same to a lesser extent for depreciation on real estate.

[72] See Davenport, A Bountiful Tax Harvest, 48 Texas L. Rev. 1 (1969) at 36-37: Except for a few industries such as the leasing of automobiles, most depreciable property subject to section 1245 does not by its very operation constantly produce merchandise for transfer, even though the merchandise so produced has also been used in the trade or business. The process of culling the livestock crop does produce this merchandise. The very nature of the business makes it inevitable that there will be substantial property that must be transferred. In most section 1245 cases, the property is either abandoned or transferred at nominal value. It may be argued that recapture is satisfactory in these cases but that it is

in the case of depreciable property, whether personal or real, t regulations[73] provide a means by which the potential recapture amou (i.e., the reserve for depreciation) attributable to each item of proper may be computed. Although this computation is sometimes complex the extreme, such as when the item has been removed from a classifi or composite account, the amount of prior deductions taken wi respect to any item of property and the amount of potential ordina income inhering in it can be precisely computed whether the proper is in the hands of the original owner or a transferee. In the case farm recapture properties, such as a herd of cattle, the amount of t potential recapture may be impossible to establish because there is means (given the bookkeeping practices tolerated for farmers) which to determine the amount of deductions which has previous been taken with respect to a particular animal. Thus, the amount potential recapture with respect to farm property cannot be sat factorily computed in some cases. Despite these differences, a decisi was made to except from recapture under section 1251 the same tran fers that were excepted from sections 1245 and 1250. These diffe ences, however, were such that they had to be recognized. The cons quence is that the rules for excepted transfers of farm property diff substantially from the rules devised to cover the exceptions to sectio 1245 and 1250.

With respect to each of the excepted transfers discussed belo two problems arise. The first is whether any gain should be recognize Obviously, if gain is to be recognized, it will be ordinary income if t property transferred is "farm recapture property," and if the tran feror has a balance in his EDA. The second problem arises only some of the gain is not recognized. If gain is not recognized, there the possibility of frustrating the statute unless the ordinary incon potential also carries over to the transferee so that his gain will not reported as capital gain. These problems were handled in the varie of ways discussed below.

a. *Gifts.*[74] Ordinary income is not recognized on the dispositi of farm recapture property by gift. A part or all of the transferor EDA may be transferred to the donee, however. If in any one ye (i.e., any 12 months—not necessarily a taxable year) the transfer makes gifts of farm recapture properties which carry at least 25 pe cent of his total "potential gain" on farm recapture property held b the donor immediately prior to the first of such gifts, then a pro-ra

unsatisfactory when transfers are inevitable and each transfer presents a substantial tax avoidance opportunity. Thus the abuse possibilities are worse in this case, and recapture just is not adequate to handle the problem.

[73] See Treas. Reg. §§ 1.167(a)-7, -8 (1956).

[74] Section 211(a)(5)(B) of the Act.

part of the excess deductions account shall be transferred to the donee of such farm recapture property. "Potential gain" is the amount by which the fair market value of any farm recapture property exceeds its adjusted basis. In the case of land, in order to preserve the special rules relating to the recapture of only the section 175 and 182 deductions on land,[75] potential gain includes only those deductions which have been taken in the current taxable year and the preceding four taxable years.

b. *Transfers at Death.*[76] Except to the extent that income in respect to a decedent is realized upon a transfer at death, there is no realization of ordinary income upon the transfer by decedent to his estate. Apparently, there is no transfer of EDA either. Thus, death seems to offer one means of avoiding EDA. In view, however, of the general ineffectiveness of EDA and of the other routes available to escape EDA, this author does not recommend death as an avoidance technique.

c. *Corporate Transactions.*[77] The relevant transfers here consist of (1) transfers to corporations, (2) transfers by corporations in liquidations or redemptions, and (3) reorganization transfers, including those falling under sections 371(a) and 374 (a).

If farm recapture property is transferred to a corporation in a transfer under section 351 and has a carryover basis in the hands of the corporation, the EDA provision of the 1969 Act does not require gain to be recognized on the transfer. If, however, gain is recognized apart from EDA, it is treated as ordinary income to the extent of the balance in the transferor's EDA. Generally speaking then, tax free incorporations are expected from the recapture provisions.

Since the section 351 transfer does not result in ordinary income, the transferor's EDA will be unchanged by reason of the transfer. Also there is a tax avoidance possibility, as pointed out above, because the transferee may have no EDA. This possibility could have been eliminated by transferring a pro-rata part of the EDA to the corporation. The decision was otherwise, however, and the transferor's EDA is not diminished by the transfer. Rather the stock and securities received by the transferor become farm recapture property to the extent attributable to the fair market value of farm recapture property[78]

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[75] See note 55 supra.

[76] Section 211(a) of the Act.

[77] Id.

[78] Id. In the case of land, if the total of the adjusted basis of the land and the "potential gain" on the land is less than the fair market value, the stock and securities are so treated only to the extent of the total of these two items. At first blush, one might think that in such case only the potential gain should be treated as property. The statute prescribes a proper rule, however. Suppose a case of property having a basis of $10 and

contributed to the corporation by the transferor. The purpose is to require recognition of ordinary income upon disposition of the stock or securities by the transferor, just as a disposition of the farm recapture property transferred to the corporation would have required recognition of ordinary income.[79]

Since the EDA does not carry over to the transferee corporation in such cases, the corporation may be able to sell the transferred property at capital gains rates after the transfer.[80] If a subchapter S election were in effect, presumably the capital gains so realized would be taxed as capital gains to the shareholder.[81]

Transfers in liquidation take a carryover basis under section 332. If the liquidation falls under section 332, the transferor will be treated as having ordinary income only if gain is recognized apart from section 1251, and then only to the extent of the lower of the recognized gain or the EDA balance.

The rules for reorganizations are similar to those for liquidations under section 332. Ordinary income is imputed only to the extent of the lower of gain recognized apart from section 1251 or the balance in the transferor's EDA. Reorganizations falling under section 381[82] result in a carryover of the transferor's EDA to the transferee. There is no carryover for devisive transfers which do not come under section 381 but the stock and securities become farm recapture property. The consequence is that in corporate reorganizations where nearly all the property is transferred, the EDA balance carries over to the transferee.[83] But in other reorganizations, there is no shift of any EDA.

d. *Like-Kind Exchanges and Involuntary Conversions.*[84] The amount which a transferor must treat as ordinary income may not exceed the balance in his EDA account or the amount of gain realized. Subject to this qualification, ordinary income is the amount of gain recognized, apart from section 1251, plus the fair market value of

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a potential gain of $15. If the stock received is then sold for $35, the receipts will be treated as from farm recapture property to the extent of $25. Presumably, basis will absorb $10, ordinary income will consist of $15 (the amount of potential gain), and there will be capital gain of $10. Failure to treat basis as farm recapture property would present difficulty in allocating receipts to various portions of the property.

[79] Obviously in some cases there will be an overlap between this provision and the collapsible corporation provision of § 341 of the Code.

[80] It is not clear that capital gain would be realized on that sale. See Davenport, supra note 72, at 39 n. 69.

[81] See § 1378 for provisions by which a subchapter S corporation is required to pay a tax on capital gains realized by it.

[82] See also §§ 371(a) and 374(a).

[83] Only those transactions involving all or nearly all of the transferor's assets fall under § 381.

[84] Section 211(a) of the Act.

roperty (as to which gain is not recognized) which is not farm re-
apture property.[85]

e. *Partnerships.*[86] Farm recapture property raises problems with
espect to partnerships (1) when the partnership disposes of such
roperty, (2) when the partnership distributes such property to a
artner, and (3) when a partner contributes farm recapture property
o the partnership.

As to the first of these transactions, under section 1251 each
artner takes into account separately his distributive share of the
arm net losses, gains[87] from the disposition of farm recapture prop-
rty, and other items.[88] Thus, the partnership is treated as a mere
onduit for the purpose of adding farm losses to EDA, reducing the
alance in an EDA by the amount of farm income for the year, and
or realizing gains on the disposition of farm recapture property.

As to the second problem, distributions from partnerships are not
ealt with directly. However, section 751(c), defining unrealized
eceivables, is amended to include farm recapture property and farm
nd subject to recapture of section 175 and 182 deductions.

As to the third problem, contributions to partnerships, the diffi-
ulties presented are those discussed at the beginning of this section on
xcepted transfers. First, is the contribution of farm recapture property
taxable transaction? If not, does the balance, or some part thereof,
the transferor's EDA carry over to the partnership? The second of
ese questions is answered negatively. The answer to the first depends
n something more. Ordinarily a contribution to a partnership is a non-
ecognition transaction by virtue of section 721. In a general way, this
ule is continued for contributions of farm recapture property, but
ere is an exception. If the fair market value of the farm recapture
roperty, contributed to the partnership, exceeds the fair market value
f the partnership interest *attributable* to the farm recapture property,
ain is recognized to the extent of such excess value.[89]

The apparent intent of this rule may be illustrated by an example.

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[85] For example, suppose a taxpayer exchanges farm land for an office building. This
a tax free exchange under § 1031. The office building is not farm recapture property.
hus, if the taxpayer had a balance in his EDA, and if the taxpayer had incurred within
e current or four preceding taxable years allowable deductions under § 175 or § 182
ith respect to the farm land, the taxpayer would recognize ordinary income in the
wer of (a) gain realized, (b) the amount in his EDA, (c) the deductions under § 175
d § 182, or (d) the fair market value of the office building. But even if § 1251 does
t apply, § 1252, discussed below, may apply.

[86] Section 211(a) of the Act.

[87] One might question the effect of a disposition which does not result in gain to
e partnership, e.g., a charitable contribution. Presumably, the nature of the disposition
ws through to the partner.

[88] Other items seemingly would include "farm net income."

[89] Section 211(a) of the Act.

Assume a case where *A* transferred cattle (farm recapture property) having a $100 value but a zero basis to a partnership in which *B* transferred cash of $100 to be an equal partner. The value of *A*'s interest would be $100, and this value apparently would be attributed $50 to the cattle and $50 to cash. *A* then would realize $50 of ordinary income on the contribution because the fair market value of the farm recapture property transferred was $100 and exceeded by $50 the value of *A*'s interest in the partnership which is attributable to the cattle.[90] The cattle would have a zero basis to the partnership, and if it sold them for $100, the partnership would realize a gain of $100. Half of this gain would be passed through to *A* as a gain on farm recapture property since he accounts for these items separately. Assuming he had a balance in his EDA, this gain would be treated as ordinary income. When this $50 gain is added to the $50 gain realized at the time of contribution, *A* will have realized $100 of ordinary income with respect to the cattle. This is a proper result because the amount is equal to what *A* would have realized had he sold the cattle and contributed cash.

The foregoing may be modified by the partnership agreement. If the partnership agreement provides for an allocation to the contributing partner of gain on the contributed farm recapture property, the partnership interest shall be deemed attributable to the contributed farm recapture property. Thus, in the above example, if the partnership agreement allocated the entire gain on the cattle to *A*, the entire value of his partnership interest would have been attributable to the cattle. Since that value and the value of the cattle were equal, he would have no ordinary income on the contribution. When the cattle were sold by the partnership, the entire gain of $100 would be allocated to *A* in accordance with the partnership agreement, and he would realize the entire gain as ordinary income, assuming he had a balance in his EDA.

The obvious purpose of this provision is to require ordinary income to be recaptured at the time of contribution unless the transferring partner agrees to take the gain on the transferred farm recapture property into account when disposed of by the partnership. In short, if the transferring partner agrees to have the gain on the assets contributed by him allocated to him and taxed to him as ordinary income if and when disposed of by the partnership, then there is no gain on the transfer to the partnership. If the partnership agreement does not

[90] Under a different construction of this section one could argue that *A*'s entire interest in the partnership is attributable to the cattle because it was received in exchange for the cattle. This construction would permit the statute to be circumvented. Also, the value of *A*'s interest in the partnership is attributable to all the assets held by the partnership. Thus, the value of *A*'s interest depends in part on the cash.

so provide, the draftsmen apparently intended that the contribution itself be a disposition requiring recognition of ordinary income. Hopefully that intent will be realized.

2. *Subchapter S Corporations*[91]

Under the Act, a corporation's entire farm loss (not just the portion exceeding $25,000) is entered into the corporation's EDA even if the corporation had no nonfarm income. Thus, corporations are treated differently than individuals who enter into EDA only if that portion of the farm loss that exceeds $25,000 and only if nonfarm income exceeds $50,000. Subchapter S corporations are excepted from the general rule for corporations and instead fall under the rules for individuals, unless a shareholder has a net farm loss for the year. If a shareholder does have a net farm loss, then the general corporate rules apply.

These provisions seem to open up a wide avenue of abuse. If a cattle operation were incorporated, any losses would be incurred at the corporate level. The loss, however, would apparently be deducted under section 1374 by the shareholders as a net operating loss deduction of the corporation, not a farm net loss. The shareholder apparently would not enter any amount into his own EDA, or for that matter be treated as incurring a "farm net loss." As a result, the $25,000 loss floor and the $50,000 nonfarm floor at the corporate level would be operative, and the corporation would not enter any amount in its EDA. Once the corporation is sufficiently aged so as to avoid the collapsible provisions of section 341,[92] the taxpayer would be in a position to sell his stock in the corporation and realize capital gain upon it. The buyer, of course, could get a step up in basis by liquidating under section 334(b)(2), and the corporation apparently would not have any income on the liquidation.[93]

Another way to use this loophole would be to hold the corporate farm loss to less than $25,000 each year. Thus, if the taxpayer decided to invest $200,000 in cattle in any one year, he could do it through eight different subchapter S corporations. The extent to which the multiple corporations doctrine would curb this practice is not predictable, but it has not been a highly successful remedy for other abuses in the past.[94]

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[91] Section 531 of the Act.

[92] Aging, of course, is not the only means of avoiding § 341. The term "aging" does not imply that a mere passage of time following incorporation will be satisfactory. Rather the 70% rule of § 341(d)(2) appears to be the surest and easiest means of aging.

[93] Cf. Commissioner v. South Lake Farms, Inc., 324 F.2d 837 (9th Cir. 1963).

[94] Compare Aldon Homes, Inc., 33 T.C. 582 (1959) and Shaw Constr. Co. v. Commissioner, 323 F.2d 316 (9th Cir. 1963) with cases such as Hiawatha Home Builders,

3. *Exception for Special Accounting Methods*

Finally, one need not keep an EDA in any year in which he elects to use inventories and capitalize all capital costs.[95]

IV. Appraisal

Despite the analysis and tears already spilled over the "farm loss" problem, the 1969 Act does not handle it. One reaches this conclusion even though an act with six provisions for a problem simple in its most egregious examples would seemingly have something for everyone. In a sense, it does, even including several special provisions for horse racing. It seems appropriate now to say a few words of evaluation.

Livestock

One cannot argue with the soundness of extending the section 1245 recapture provision to livestock. Nor can one fault the extension of lives for qualification of livestock under section 1231, unless perhaps to argue that livestock should never be defined as property used in the trade or business—at least where raising costs are entirely deducted. Further discussion of this aspect is deferred for the moment.

Inc., 36 T.C. 491 (1961); Cronstroms Mfg. Co., 36 T.C. 500 (1961); Pre-Mixed Concrete, Inc., ¶ 63,301 P-H Memo T.C. (1963); and Sno-Frost, Inc., 31 T.C. 1058 (1959).

95 But even statutorily imposed adoption of proper accounting methods would not solve all the problems in the farm area. There would continue to be a need for administrative action. Commissioner v. South Lake Farms, Inc., 324 F.2d 837 (9th Cir. 1963) demonstrates one such problem. The taxpayer was an accrual basis taxpayer who shrewdly observed that under Treas. Reg. § 1.61-4(b) expenditures which would be carried as inventory costs in most businesses continue to be deducted by even accrual basis farmers. There is an income offset to the deduction only if the expenditures create an item which must be included in inventory. Growing crops probably are most nearly like goods in process inventory. As such, these costs should inventory. The law and custom has long been to the contrary. They may not be valued and included in inventory. I.T. 1368, I-1 Cum. Bull. 72 (1922); Internal Revenue Service Publication No. 225, Farmer's Tax Guide 17 (1969 ed.); Amling-De Vor Nurseries, Inc. v. United States, 139 F. Supp. 303 (N.D. Cal. 1956). Thus, if the tax year can be ended while the crops are growing, the expenses thereof may be deducted, and there will be no offsetting inventory value. A loss thus can be planned. A mere change in rulings and regulations could handle this problem. Note also that the Farmer's Tax Guide applies "the growing crops cannot be inventoried" rule only to crops which are not purchased. This limitation is not supported by the regulations or I.T. 1368, supra. However, case law seems to reach that result without specifically so stating, but relying on other provisions of the regulations. See, e.g., W. Cleve Stokes, 22 T.C. 415 (1954), acq. 1954-2 Cum. Bull. 5. Except for alleged ease of determining proper inventory values, there is little reason to distinguish between purchased and planted growing crops. It is believed that a similar distinction is made in cases of chicken. It appears that Internal Revenue Service practice requires a purchase of fertilized eggs, even up to the instant before birth, to be treated as a raising cost which may be currently deducted. If, however, the chick cracks the shell and sticks his head out before purchase, the cost must be capitalized as a cost of purchased animals.

FARM LOSSES

Hobby Losses

The new "hobby loss" provisions are a distinct step to the rear. A showing of one dollar of income in any two of a five-year period places on the government the burden of proving that the taxpayer did not expect to realize a profit from his activities which are alleged to be a business. Since most of the facts which would prove such an intention are within the control of the taxpayer, he should not be relieved of his burden of proof. Furthermore, the existence of so little a profit really has no probative value in demonstrating the taxpayer's intent. Thus, the presumption is both unduly generous and logically unsound. Furthermore, the provision is not limited solely to farming, but rather applies to all activities engaged in by a taxpayer. Such broad sweep legislation should not have been considered nor enacted as part of a package supposedly directed toward the much narrower "farm loss" problem. Finally, the provision is far from free of ambiguity.[96] It thus appears unwise when viewed from almost any stance.

Farm Land Recapture

The provision recapturing section 175 and 182 expenses again indicates the ambivalence with which Congress apparently views its own solemn acts. It gives the subsidy by permitting capital costs to be deducted. The subsidy, however, is removed if the taxpayer sells the land within ten years of purchase. Thus, Congress seems to be saying that the activity encouraged by the current deduction of costs is good only if the taxpayer incurring such costs has had the land a long time, or is willing to keep the land for a long time (ten years) after purchase. The period of retention is not related to the "good" done and may reward the owner who had the land long enough to let it run down under his use. Also the provision is a "recapture" proposal, and as discussed below, the wisdom of recapture is certainly questionable. If there is a problem it should be dealt with directly rather than through recapture.

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[96] For example, does gross income from an activity include the deducted one-half of capital gains which are not taxed? James McDonald, 23 T.C. 1052 (1955), would include deducted capital gains on gross income. See also Tax Reform 1969, 5184 and Rev. Rul. 56-191, 1956-1 Cum. Bull. 636 modifying Rev. Rul. 219, 1953-2 Cum. Bull. 181, as modified by Rev. Rul. 57-727, 1957-2 Cum. Bull. 222. The same group of authorities also hold that the capital gains deduction is not a deduction attributable to the activity which produced the capital gain. If these authorities remain, one need not even show a taxable profit to raise the presumption in his defense. Thus, if gross income consists of capital gain of $100, the income is in excess of deductions in such year if all deductions attributable to the gains other than the § 1202 deduction are not more than $99.99. This would result in a one cent excess of gross income over deductions even though reported as a $49.99 loss for tax purposes. Two such years in any five-year period raises the favorable presumption. Could Congress have so intended? See also note 39 supra.

Crop Insurance Proceeds

The provision giving relief under certain circumstances where a crop is damaged or destroyed has little to recommend it. It is limited to cash basis taxpayers and is, therefore, discriminatory. It erodes the concept that the tax should be paid at least as early as the end of the year in which the cash is received in hand. Its avowed purpose is, of course, to alleviate the full impact of the progressive tax rate schedule on the inclusion of two years income in one year, but this impact is already substantially lessened by averaging. Thus, the justification for this provision hangs by a thin thread. On balance, one may be inclined to withhold criticism because the provision will affect so few taxpayers, but surely this is a less than persuasive argument for supporting it.

Citrus

The rule adopted for citrus is highly discriminatory, leading one to inquire, "Why pick on citrus groves?" Perhaps syndication of citrus groves did represent a growing abuse. But by discriminating against citrus, the abuse will merely shift to another crop. Even if the discrimination against citrus could be justified, the rule does not operate uniformly even as to all citrus. In sum, the concept that capital costs should not be deducted is a good one, but it should be more rationally structured and should extend to all farm investments.

EDA

This is the heart of the farm tax program. And the heart is so weak as to suggest that the body would not remain alive for long except for the nostrums which can be administered by Congress from time to time.

One assertion appears to be true: the farm loss problem will continue to exist. While there has been much expression of concern by nearly all members of the tax writing committees,[97] in light of the legislation produced by the hearings, and the mountain of evidence available to demonstrate its ineffectiveness, one is uncertain whether all of these good intentions should be taken seriously. As noted by Mr. Stephen Hart in 1963, the excess deductions account approach which was taken in the Act is the most modest approach which has been suggested.[98] The Chairman of the Senate Finance Committee is hopeful that some other approach may soon be taken.[99] This is an expression of hope in which many would join.

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[97] Tax Reform 1969, 2001-184 and Hearings Before the Senate Finance Comm. on the Tax Reform Act of 1969, 91st Cong., 1st Sess., 2710-922, 3491-552, [hereinafter cited as "Tax Reform Act"] are replete with concern over the farm tax loss problem.

[98] See "Tax Reform Act" at 2710 (remarks of Senator Metcalf, September 22, 1969).

[99] 115 Cong. Rec. S17554 (daily ed., December 22, 1969).

FARM LOSSES

Before dismissing this provision out of hand, however, let us once more return to the basis of the farm loss problem—the premature deduction of capital costs. The major problem with the excess deductions account is that it simply is not an effective tool because it fails to recognize the major difficulty in the farm tax area, that is, the ability to deduct currently against nonfarm income expenses which are capital expenditures. While this aspect of the problem may be lessened by the extension of lives for livestock, thereby denying capital gain to more of the sales proceeds, even complete denial of capital gain treatment would not reach the major abuse.

To demonstrate, let us assume a case where net livestock costs (all expenses less sales returned as ordinary income) are just $100 in year *1*.[100] If the livestock is sold in year *2* for $110, there is a net economic profit of $10. The deduction of the net livestock costs of $100 in year *1* yields a tax benefit which, assuming equal tax rates in both years, is just equal to the tax detriment under EDA incurred in year *2* when $100 of the $110 sales price becomes ordinary income. Thus, without considering the benefit of deferral resulting from deducting costs in year *1* while reporting sales in year *2*, the tax cost of year *2* offsets the tax benefit of year *1*, and, just as if costs had been capitalized, EDA permits only the net $10 economic profit to be reported as capital gain. Under the Act, the maximum capital gain rate will become 35 percent.[101] The net tax at capital gains rates would be $3.50 when applied to the economic profits in this case. If capital gain were entirely eliminated, the entire $110 would be reported as ordinary income. The maximum ordinary income tax on the economic profits would be 70 percent or $7 in this case. The maximum benefit then from the rate differential on economic profits will be 35 percent of economic profit or $3.50 in this case.

The example ignores the benefit of deducting $100 in year *1* and reducing taxes on other income. To a 70 percent taxpayer, the deduction against other income results in a tax savings of $70 which is an interest free loan of $70 for one year until the tax is incurred in year *2*.[102] If the taxpayer has an 8 percent discount rate (can earn 8 percent

[100] For the purpose of this discussion the $25,000 farm loss and the $50,000 nonfarm income floors under § 211 of the Act are ignored.

[101] See H.R. Rep. No. 782 91st Cong., 1st Sess. 317 (1969).

[102] Note that the estimated tax does not require an installment repayment of this loan because, ignoring surcharge years, there is no penalty for underestimation of the estimate for year *2* if it were based on year *1* income. Year *1* income was, of course, reduced by the $100 deduction. Thus, there is no sanction for his failing to repay the loan by way of estimated tax. Note also that even if the penalty for underestimation applied, it would be computed at 6% simple interest. This averages out about 3% on the total underestimation. In the usual case, a taxpayer will be able to earn more than the 6% after tax. If the penalty were assessable, which it would not be in this case, the penalty is, of course, not deductible.

after tax), this loan has a value of $5.60 (8% × $70). This benefit is greater than the detriment arising from the conversion of capital gain to ordinary income.

While this demonstrates the nature of the problem, the benefit rises sharply if the profit margin is significantly lower. Witnesses before the Ways and Means and Finance Committees suggest that profit margins are around 1 percent to 5 percent.[103] Whether this is a *percentage of the cost of sales* or a *return on capital investment* is not clear. In many of the syndicated operations, cost of sales and capital investment may be nearly equal. The return on the interplay of the tax rules (deduction of raising costs leading to deferral of taxes in that year) is much greater than the tax on the economic profit (whether taxed as ordinary income or capital gains), and the relative value of the tax interplay return increases as the margin of profit declines because the tax payable on the profit declines.

Taxing all livestock gains as ordinary income might be a step in the right direction, but it does nothing to reduce the net difference between the benefit of deferral and the detriment of the tax. But note that if, in the above example, the net profit were $1 (instead of $10), even ordinary income treatment would result in a tax detriment of $.70, which is much less than the $5.60 benefit of the interest free loan. Also, deferral permits the taxpayer to choose to some extent when the income will be realized. A taxpayer having a choice will, of course, attempt to structure realization so as to incur the least tax. Anything short of removal of the deferral benefit will be ineffective, and certainly EDA does nothing to impinge on the sanctity of current deduction.

The Act also fails in another significant respect: it is limited to taxpayers who have a combination consisting of (a) farm losses of $25,000, and (b) nonfarm income of $50,000. The impact will thus be on just a few taxpayers. As has previously been noted,[104] in 1964 there were about 3,000,000 farm tax returns filed by individual taxpayers. Over 1,100,000 of these returns showed farm losses. The EDA in the Act, however, apparently would affect only about 4,000 or 5,000 returns, and even this impact will be significantly reduced since only the loss over $25,000 will go into the excess deductions account. The long range estimate in gross revenue is about $20 million. Thus, the number of taxpayers affected will be small, and the amount of revenue miniscule in comparison with the amount funnelled into some farm investments to take advantage of tax law.

The amount of revenue raised and the number of taxpayers af-

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103 See 1963 Tax Message 1541; Tax Reform 1969, 2035 (remarks of Claude Maer, Jr. on behalf of National Livestock Tax Committee).

104 See Davenport, supra note 72, at 51-52 for the figures discussed in text.

fected are not, of course, the only criteria by which to measure a provision dealing with the farm loss problem. More importantly, one must ask if the Act will significantly reduce the federal subsidy going to taxpayers having both (a) certain kinds of farm investments and (b) substantial nonfarm income, so as to put them on an equal competitive basis with those farmers who do not have the nonfarm income. The overall purpose thus should be to discourage some investments in farm assets by improving the equity of the tax structure. On this ground, EDA fails. It will permit all comers to incur tax losses up to $25,000 each year. Thus, it seems to fail in reaching a significant number of taxpayers in a meaningful way.

EDA may also be criticized on three other grounds. First, it is so complex as to be almost incomprehensible. Perhaps that degree of complexity could be justified or tolerated if some public purpose were served by it, but none appears. Instead the complexity arises from the application of a poor idea (recapture) to a simple problem (premature deduction of costs). In the area of application, the extent to which recapture should apply is impossible to determine because taxpayers are permitted the use of overly liberal accounting rules. The result is a congery of problems and rules. The problems defy rational solution in light of the accounting rules which farmers are allowed to use. The rules devised are not justifiable, although they are perhaps as rational as one could hope.

The tax writing committees undoubtedly would justify the complexity on the ground that simplicity is thereby preserved for "legitimate" interests.[105] Consequently, those who must deal with complexity are only "illegitimate" interests. In the abstract, this may appear reasonable. But the line between the two kinds of interests is arbitrary and cannot be explained on any rational grounds. Furthermore, many taxpayers who ultimately will prove to be "legitimate," in the sense that they are not subject to EDA, will incur the cost and bother of so ascertaining and, perhaps on audit, so demonstrating. Thus, the complexity has a broader sweep than the "illegitimate" farmer.

Second, as with all recapture provisions, a penalty is exacted only when there is a disposition of property. Thus, one who disposes of property is put at a disadvantage to those who retain property. Similarly, one who sells early is harmed more by recapture than one who sells later. There does not appear to be any reason for so distinguishing between taxpayers. If the tax benefits of premature deduction are intended as a highly inequitable and costly subsidy which prefers

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[105] See Griffith and Joy, What the Act Does to the Farmer: Farm Parity or Class Discrimination, 23 The Tax Lawyer, 495 (1970).

high income taxpayers over others,[106] there is little reason to recapture the benefit when sale occurs. If the farm accounting rules which offer these benefits are not intended as a tax subsidy, then they should be repealed, not made more aberrational by recapture.

Third, EDA may be accepted as reform, thereby lessening the demand for some effective change in this area. While this consequence may follow for some short period, we can hope that it is not an enduring result and that those who grew to know and question the farm loss loophole will soon realize that it still exists, almost without any change at all.

V. Conclusion

This discussion closes by recapitulation. There are two forward, but not very significant, steps: the application of section 1245 to livestock and the extension of livestock lives for section 1231 qualification. There are also two backward steps one of which is serious. The hobby loss provision is unwise and seemingly without any justification whatsoever. The special treatment accorded crop insurance proceeds is unwise also, but seemingly is a very minor provision possibly based on the hardship of requiring two years' income to be reported in one and offset by only one year's expenses.

The other provisions are more difficult to evaluate. We could say that the citrus provision is definitely a significant step forward in one area of substantial abuse, but it is much too narrow to be strongly praised; that the recapture of section 175 and 182 expenditures is so small an improvement as to be at best an oblique step turned sharply to the side; and that EDA is at best oblique, and may be wholly to the side—nay, even obliquely backwards—because it seems to be structured so as to remove the matador from the path of the charging reformers, without goring the ox of those who have a somewhat greater than normal vested interest in the present farm tax accounting rules. In general, therefore, the best one can do is to claim a stand-off. An objective evaluation may result in the discovery of more minuses than pluses. But assuming a stand-off, is that really good enough for the much heralded tax reform? One would suppose not.

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[106] See Surrey, Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures, 83 Harv. L. Rev. 705, 720-25 (1970).

DAMMING THE WEST

The Nader Task Force Report on the Bureau of Reclamation

FOREWORD BY RALPH NADER

BY:
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FOREWORD

by

Ralph Nader

To most Americans, the Bureau of Reclamation is less familiar than the moon. To others, Bureau of Reclamation is an agency that specializes in getting water to land near and far. To a number of special economic interests, however, the Bureau is a determined sugar daddy with powerful Congressional allies. To all those who are not profiteering or being graphically bilked by Bureau's policies and discriminations, the agency, lodged in the Department of the Interior, is Dullsville incarnate. But dull subjects tend to be important subjects with their aura of ennui to the outsider serving a shielding function which dissuades inquiry and scrutiny.

As this Report shows in detail, the Bureau of Reclamation has an impact on the West and on Indians, farmers, taxpayers and recreational users that is anything but dull, once those impacts are reduced from high level abstractions and slogans and brought down to earth in terms of Bureau generated resource use and cost, direct and indirect. As the editors and co-authors, Richard Berkman and Kip Viscusi, analyze the Bureau's benefit-cost calculations, its cost overruns, its tunnel-vision inattention to devastating ecological consequences of its works and the need of impoverished Indians for water, they conclude that many of

Bureau's activities should be stopped, curtailed or redirected. Whatever usefulness attached to the Bureau's projects earlier in the century, before surpluses glutted the warehouses and the massive farm subsidies began, in recent decades the economics and equities argue for a serious and immediate reassessment of the Bureau's various functions. Berkman and Viscusi conclude that "BuRec irrigation facilities not only cost billions of dollars to build and operate, but also drive thousands of other farmers out of their jobs, and increase the amount of money that the U.S. Department of Agriculture must send to curtail surplus crop production and to support agricultural prices. Thus, taxpayers are hit coming and going."

The Report does more than critique prevailing Bureau projects and policies; it strives to provide supported recommendations for changes in priorities and procedures in deciding upon what courses of action the agency is to take. As a government agency with specific and relatively finite missions, Bureau looks for new waters to conquer on more and more insupportable economic foundations and environmental neglect. An intriguing inquiry which will not be answered until more official monitoring of Bureau by the Congress occurs is: how could the economists and other professional employees and consultants to the Bureau have countenanced such dubious, if not specious rationale and projects? What kind of professional independence has been repressed by the pressures of a single-minded bureaucracy? These are questions of critical pertinence because they relate to one of the

principal internal checks on run-away government policies, waste and unchallenged special interest pressure groups. Indeed, in a number of contexts this Report raises these questions and until they are answered the necessary impetus to reshape the Bureau will be delayed.

It is hoped that the graduates and students who worked to produce this Report will receive from the Bureau, not the customary self-serving responses or glib waivers, but a considered treatment of the matters discussed and the proposals put forth.

* * *

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DAMMING THE WEST

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ACKNOWLEDGEMENTS

In June 1970, a Task Force of lawyers, graduate students, and undergraduates began an intensive study of the activities of the Bureau of Reclamation. These Task Force members collected volumes of raw data and interviewed hundreds of Bureau of Reclamation officials and other individuals, both inside and outside the Federal Government. At the end of the summer, they left Washington, taking with them the material they had gathered. During the year, some of them spent hundreds of unsalaried hours distilling their results. This summer the two of us returned to Washington to fill in the gaps in the previous year's research and to draft a final report.

Almost everyone we contacted was generous with their time and cooperative in providing what information they had. We would especially like to thank Professors Richard J. Zeckhauser, Robert Edelstein, and Stephen Marglin, as well as the economists at Resources for the Future, who shared their expertise with the Task Force. In the area of water law and Indian water rights, we wish to thank William Veeder of the Bureau of Indian Affairs for the special interest and help he gave us. At the Department of the Interior, James J. Flannery, Daniel V. McCarthy, and Donald D. Anderson helped us open up the Bureau of Reclamation and the federal bureaucracy in general, so that we could make a more informed analysis. None of these individuals, of course, bea responsibility for the contents of this report.

We also want to acknowledge the special contribution of certain individual Task Force members. Jamie Harris provided a rough draft of some of the case study material used in Chapter 3; Burt Solomon did the primary research and writing of the section of the Indians; and the chapter on the Central Arizona Project is almost exclusively Dan Barney's contribution. Dan Barney also provided numerous editorial suggestions. Special thanks to Judy Berkman for helping to keep our writing intelligible, and to Teri Loftus, who was a great help typing.

In the final analysis, however, we take full responsibility for the information, analysis and opinions expressed in this report. We address it to well-intentioned civil servants and administrators, to responsive legislators and to the general American public, with the hope that it will provide a constructive, new perspective on the goals and operation of the Bureau of Reclamation.

Kip Viscusi
Richard L. Berkman

November, 1971

INTRODUCTION

CHAPTER 1.

WATER OVER THE DAM

Background on Bureau of Reclamation Activities

Who gives a damn about the Bureau of Reclamation? Those beneficiaries of over $1 billion[1] which have since 1902 been poured into Reclamation projects in the 17 Westernmost states* and Hawaii know about it (see map on facing page). So should citizens who bear the real cost of the Bureau's continued activities.

In 1902 Congress enacted the Federal Reclamation Act[2] to promote the economic development and settlement of the West under the homestead acts. As a part of this act, Congress also created the Reclamation Service, which became the Bureau of Reclamation in 1923. During its first decade, the Bureau devoted 97% of its efforts to irrigation.[3]

Two of the most notable projects in Reclamation history are Hoover Dam on the Colorado River between Arizona and Nevada and the Grand Coulee Dam on the Columbia River in Washington. Acclaimed by the American Society of Civil Engineers as engineering marvels, these and other early Reclamation projects have also contributed significantly to the development of the West. Bureau water has converted what was once arid wasteland into

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*Washington, Oregon, Idaho, Montana, North Dakota, South Dakota, Wyoming, Nebraska, Kansas, Oklahoma, Texas, New Mexico, Colorado, Utah, Arizona, Nevada and California.

fertile fields; Bureau hydroelectric power has contributed to the growth of western cities; and Bureau dams have helped prevent many potential floods and created vast lakes for recreation. "I give them high marks, " Rep. Morris K. Udall (D-Ariz.) has said. "The history of the Bureau of Reclamation for its first fifty years is tremendous, visionary."[4]

The Past and Current Scope of Bureau of Reclamation Activities

As a testament to their accomplishments, the Bureau of Reclamation has compiled an impressive statistical record:

1) 153 projects authorized as of January 2, 1971, and ranging in size from a small single pumping plant to a multi-unit Missouri Basin Project spread over ten states and costing over $1 billion;

2) Nearly $11.5 billion as the total estimated cost when completed of all the projects already authorized;

3) $6,156,000,000 already expended as of June 30, 1970;

4) About a $5.5 billion backlog of authorized but incompleted work;

5) A potential storage capacity of 134,471,000 acre-feet* of water--or enough to cover the entire six states of New England to a depth of more than three feet;

6) Over ten million acres of irrigated land--or the equivalent of irrigating an area larger than twice the size of New Jersey;

7) Over 600 billion gallons, or nearly two million acre-feet delivered in 1969 to about 14.5 million people for municipal and industrial uses;

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*An acre-foot is the amount of water needed to cover one acre of land to the depth of one foot--or about 326,000 gallons.

8) Forty-nine hydroelectric power plants generating 48 billion kilowatt hours of electricity in FY '70 and 16,000 miles of transmission lines--or enough operating and transmission capacity to light New York City.

9) Other general Reclamation statistics as indicated in Table 1-A from which most of the above figures were drawn.

These figures indicate that the Bureau of Reclamation is involved in more than merely reclaiming land. Through numerous amendatory and supplementary acts to the original Reclamation statute, Congress has expanded the responsibilities and, therefore, the pork barrel potential of the Bureau of Reclamation.

Now, in addition to irrigating more farmland, BuRec* is responsible for developing adequate water supplies for municipal and industrial uses, hydroelectric power, flood control, navigation, river regulation, water quality control, recreation, and fish and wildlife. It has even extended its bureaucratic tentacles into the research and development of weather modification techniques.

The following capsulized summary of the Bureau's FY '71 budget gives a good picture of the scope of current Reclamation activities:

1) About 9,500 full-time employees;

2) Over $319 million appropriated and spent in FY '71--or more than the combined budgets of Phoenix, Arizona ; Oklahoma City, Oklahoma; Portland, Oregon; and Seattle, Washington;

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*BuRec is an abbreviation used by other government agencies to refer to the Bureau of Reclamation.

3) More than $20 million spent in FY '71 on general investigations, including 26 reconnaissance studies, 10 basin surveys and 39 feasibility investigations;

4) Over $215 million of the FY '71 budget spent on construction and rehabilitation of authorized projects, including funds for the Upper Colorado River Storage Project and the Colorado River Basin Project;

5) About $70 million appropriated in FY '71 just to operate and maintain existing projects;

6) More than $14 million on general administration;

7) Over $5 million for the Small Reclamation Project Loan Program;

8) Requesting over $360 million for FY '72 appropriations;

9) Other budgetary figures are indicated in Table 1-B from which most of the above figures were drawn.

Procedures for Promoting and Justifying Bureau Activities

When a project is requested, the Bureau may, on its own authority, launch a reconnaissance study,which takes six to eleven years and costs from $75,000 to $3 million. About 60% of these are followed by more extensive, elaborate, and expensive "feasibility" investigations. Authorized by Congress, these more detailed studies require 11 to 21 more years to complete and range in cost from about $275,000 to $7 million.

These feasibility reports serve as the basis for winning Congressional authorization and appropriations for project construction. BuRec submits 80 to 90% of their feasibility reports to Congress, which eventually approves almost all of those submitted.[5]

One reason BuRec projects are received so warmly on Capitol Hill is that the Congressmen responsible for making the cricial decisions concerning them hail from the very states which get the projects. All but two of the 16 members of the

Senate Interior and Insular Affairs Committee of the current 92nd Congress are from Reclamation states; and 24 of the 38 members of the House Interior and Insular Affairs Committee are from Reclamation states.

The key part of the feasibility reports, which the Bureau of Reclamation relies on to secure Congressional approval, is the benefit-cost evaluation. Long before the computer replaced the slide rule and the adding machine, and even before Robert McNamara introduced benefit-cost analysis into defense planning and decision-making, the Bureau of Reclamation had its own project evaluation procedures. In the mid-1940's the Bureau of Reclamation adopted the economic technique known as benefit-cost analysis* as a method of justifying its projects.

Through a variety of methods, the Bureau attaches dollar values to those future benefits and costs it predicts for its projects. These values are then adjusted or "discounted" to recognize the fact that a dollar of income today is worth more than a dollar of income some time in the distant future. If a project's total discounted benefits exceed total discounted costs, then the Bureau labels the project economically feasible. Each project must pass this economic feasibility test before it can be authorized.

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*Often called cost-benefit analysis.

A simple shorthand has also arisen. If a project is economically feasible (benefits exceeding costs) then the ratio of discounted benefits to discounted costs is greater than 1.0. Congressmen often rely on the so-called benefit-cost ratio as a statistical summary of a project's relative desirability.

This Congressional display of blind faith is far from commendable in view of the biases and distortions the Bureau incorporates in its benefit-cost studies. Daniel A. Dreyfus, staff member of the Senate Committee on Interior and Insular Affairs, admitted that BuRec's benefit-cost analyses are "worthless and phony."[6] Even a high-ranking Bureau of Reclamation economist confessed that "Congressmen unfortunately take the benefit-cost ratios seriously. Really they are not too meaningful."[7] Since these "phony" economic feasibility figures serve as the main justification for the Bureau of Reclamation's continued existence, they merit fuller examination.*

The Thrust of This Report

The time has come for a thorough scrutiny of the impact of the Bureau's persistence in damming up America's waterways. What was considered acceptable practice for the past 70 years of operation is no longer tolerable. Traditional critiques of Bureau activities have focused merely on specific drawbacks, such as isolated environmental damage. Since BuRec invariably

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*For a list of benefit-cost ratios of projects for which BuRec requested funds for FY '70, see Table 1-C. The number of projects with benefit-cost ratios that are marginal at best is quite large, as Table 1-D demonstrates.

responds by pointing to its favorable benefit-cost studies, which dazzle the Congressmen and effectively mute all further criticism, the Task Force decided to meet the Bureau of Reclamation on its own ground by reviewing BuRec's basic benefit-cost procedures.

The Task Force first looked at aspects of the Bureau's attempts to quantify project benefits and costs. Are these benefits and costs accurately calculated? For example, why is the irrigation of new farmland and the consequential production of crops in the West calculated as a major benefit when the Department of Agriculture is paying billions of dollars to farmers all over the country to limit surplus crop production (Chapter 2)?

Another issue is whether the Bureau of Reclamation fully calculates the cost of their projects in terms of their impacts on our environment (Chapter 3). In particular, have they taken adequate account of water quality, recreation or fish and wildlife? Or have they fully considered the risks associated with their weather modification programs? And what other ecological impacts does--and should--the Bureau of Reclamation consider?

In Chapter 4, the report evaluates more technical distortions in the Bureau's benefit-cost procedures. What kind of data does the Bureau of Reclamation rely on in making its calculations? Why does the Bureau use one of the lowest discount rates in government and give an unjustifiable bias to its benefit-cost ratio? How does it systematically over-estimate the benefits of electric power, municipal and industrial water and secondary contributions? Finally, how are the actual benefits and costs of Reclamation projects distributed in economic terms?

Since the Task Force did not confine itself to technical matters, this report evaluates who really benefits and who actually suffers from Bureau of Reclamation projects. In Chapter 5, we look at the Central Arizona Project and discover that bureaucrats and politicians are prime beneficiaries of the Reclamation pork barrel. Chapter 6 reveals how Reclamation projects also give hidden subsidies to big landowners, and speculators. In particular, this chapter analyzes how the Bureau conceals subsidies in its management of repayment plans and in its lack of enforcement of the 160-acre limitation. In Chapter 7, the report exposes the Federal Government's unjustified violation of Indian water rights and its failure to provide Indians with the Reclamation projects they need.

Since the Bureau of Reclamation frequently defends itself by claiming it is re-evaluating and updating its own goals and procedures, the Task Force felt compelled to appraise and challenge those revisions in the making. Therefore, Chapter 8 looks at how the Water Resources Council fails to address the real issues.

In short, the Task Force is asking: After seventy years of reclamation, has the Bureau of Reclamation outlived its usefulness?

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PART I: THE ANALYTIC DECEPTION

> There are three kinds of lies: lies damned lies, and statistics.
>
> --Disraeli

CHAPTER 2.

IRRIGATION - TOO MUCH OF A GOOD THING

When patriotic Americans recount the entities sacred to our country's traditions, agriculture rarely falls far behind motherhood and the flag. While society is presently asking challenging questions about motherhood and the flag, the Task Force decided to scrutinize and challenge BuRec's myths about agriculture.

Congress set up the Bureau of Reclamation as an irrigation agency responsible for reclaiming- in other words, irrigating--the arid lands of the West.[1] BuRec has performed this job well. Its water has transformed millions of acres of previously arid land into highly productive cropland. As of June 30, 1970, Bureau water served ten million acres of land- an area larger than the combined acreage of the states of Hawaii, Rhode Island, Delaware, and Connecticut. An impressive amount of crops are produced on BuRec-irrigated lands: almost 50 million tons annually as Table 2-A indicates.

BuRec claims these crops as substantial irrigation benefits in its economic evaluations of projects. Although the specific Bureau provisions for putting dollar values on irrigation "benefits" are somewhat detailed, the basic concept involved is fairly simple. The 1959 Reclamation Instruction manual contains the following provision:

> Direct irrigation benefits are the increase in net farm income resulting from the application of project water.[2]

The revision of the benefit evaluation procedures in 1962 by the President's Water Resources Council left this concept virtually unchanged. Irrigation benefits are still defined as "the increase in net income of agricultural production..."[3] What this really means is that BuRec claims an irrigation benefit equal to the increase in income of farmers receiving BuRec irrigation water.

The Task Force disagrees with this procedure. Several negative benefits (or "irrigation costs") must be subtracted from the Bureau's figure to get the net irrigation benefit to the country. One of the negative benefits of BuRec irrigation is the decrease in income of farmers on non-BuRec-irrigated lands. The Bureau should calculate these negative irrigation benefits. If it did so, the net benefit of irrigation would invariably be zero or even negative.

Do We Need More Farm Land?

It is difficult to find a convincing rationale for further irrigation efforts. While BuRec has been irrigating new farm land, the Department of Agriculture has been trying to hold down excess agricultural production. These two agencies working at cross-purposes waste billions of dollars of the taxpayers' money.

The Department of Agriculture has undertaken several expensive programs to limit agricultural output and to take farm land out of production. The Soil Bank Program took cropland out of production; the Cropland Conversion Program,

the Commodity Diversion Programs, and the Cropland Adjustment Programs are efforts to convert cropland into fields of grass and trees. In addition, various acreage allotment programs and marketing quota systems limit the amount of specified crops that can be grown.

Marion Clawson, a prominent agricultural economist and a consultant for Resources for the Future,* recently estimated that "over 50 million acres of cropland are currently lying idle as a result of government programs."[4] Yet, this is not all of the available, unused farm land. The Department of Agriculture estimates that there is another 110 million acres of U.S. cropland lying idle, which has not been retired by government efforts.[5] In short, more than one-third of the available cropland in the U.S. is not being used currently. Hence, there is no present requirement for more irrigated land.

But what about future needs? BuRec officials often cite the increased food requirements of an expanding population as justification for more irrigation. One recent BuRec publication reasoned:

> Continued and increased effort will be necessary to feed the burgeoning population of the future... If supported only by

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*Resources for the Future is a non-profit natural resource research and consulting organization, established with the cooperation of the Ford Foundation in 1952.

> presently developed resources, within a decade the West would become a deficit agricultural area--not only in terms of certain items of food, as at present, but in total production.[6]

On the surface, this argument for developing land resources to meet future needs might seem to make a lot of sense. But one major underlying fallacy in the BuRec argument is that future crops will not be produced using only "presently developed resources." Even if no more land is irrigated, existing resources will be developed to a greater extent in the future through increased use of fertilizer, improved agricultural machinery, and other technological advances.

Apparently, BuRec ignores potential technological developments in estimating the irrigation needs of the West. In the Mountain and Pacific Regions, for example, food production increased from 16.3 million tons in 1940 to 23.4 million tons in 1960. BuRec claimed that, in the absence of new irrigation projects, food production in this area would reach only 28 million tons by 2010.[7] However, continuation of current trends would place food output at well over 40 million tons by 2010. Although the amount of irrigated land may not significantly increase without more BuRec projects, there is no reason to assume that food production will be adversely affected.

The National Advisory Commission on Food and Fiber believes that more irrigated land is not needed:

> Policies should be tied less closely to land, since land is becoming a less limiting factor in food and fiber production.[8]

s a result, the Bureau's predicted agricultural shortages, based on the assumption that land is the critical factor f production, are not justified.

Furthermore, it does not make sense to exacerbate urrent short-run surplus problems because of hypothetical ong-run contingencies. The existence of substantial crop urpluses and millions of acres of retired cropland certainly ive the U.S. enough flexibility to wait until the prospect f an agricultural shortage is somewhat more than a very shaky, ong-range hypothesis. There is no need to continue to irigate additional land as a hedge against a problem which ill probably never arise.

In fact, the consensus of agricultural experts is that and shortages pose no foreseeable problem at all, even in he long run. The USDA Agricultural Stabilization and Conervation Service offered the following evaluation of agricultural production trends:

> Less and less land is being planted and harvested. Of the 460 million acres of cropland, farmers now harvest only about 300 million acres. This is the smallest harvested area since 1909...Ever since 1950, after the accrued benefits of science and technology had really hit agriculture, yields almost doubled and are still climbing.
>
> Higher yields make it possible to divert more crop acres from intensive production to grass, trees, and other conservation uses.[9]

The National Advisory Commission recently released a similar study evaluating Food Needs and U.S. Agriculture in 1980. This Commission concluded that U.S. agricultural surpluses will be even greater in 1980 than they are now.[10]

Several individual economists also have agreed that the U.S. has an excess farm capacity far into the future. Roger Strobehn, the Economic Research Service economist representing the Department of Agriculture on the Water Resources Council Task Force, claimed that he "would have a hard time defending the need for more irrigated land."[11] Marion Clawson, agricultural economist for Resources for the Future, expressed similar sentiments:

> Today, there are about three million farms in the United States. At least two-thirds of these are unneeded in the long run.[12]

In short, leading agricultural experts tell a far different story than do BuRec officials. These experts from Resources for the Future, the Water Resources Council, the National Advisory Commission of Food and Fiber, and the U.S. Department of Agriculture all agree there is no need for more farm land either now or in the future. Thus, the crucial question of whether more irrigated land is needed has been answered with a resounding "No!" The Task Force therefore concludes that there is no existing justification for sinking more of the taxpayers' money into new BuRec irrigation efforts.

The Untold Costs of Irrigation: Surplus Crops and Unemployed Farmers

To a great extent, the preceding arguments against continued irrigation relied upon common sense and basic economic concepts, and focused on the effect of more irrigation. To determine the real impact of current BuRec programs, the Task Force made a crop-by-crop analysis of crops grown on BuRec-irrigated lands. We found that BuRec's irrigation benefit calculations are specious.

Forage: Over 40% of all BuRec-irrigated land is used to grow forage. Pasture, alfalfa, corn fodder, hay, and other such forage differ from most agricultural outputs in that they do not go directly into human consumption. In fact, much of this forage is not marketable since many farmers grow their own livestock feed and don't buy it. By lowering feeding costs, excess forage production encourages farmers to raise too much livestock.

Technically speaking, the Department of Agriculture never labels forage and livestock as "surplus" since it has no price support program to buy up and store these commodities. However it is very possible that these non-"surplus" outputs of forage and livestock could cause livestock prices to fall sufficiently to drive many farmers out of business.

Professor Charles W. Howe* former director of the Resources for the Future water resources program and Professor K. William Easter* former Bureau of the Budget economist,

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*Howe is now Professor of Economics at the University of Colorado. Easter is now Professor of Economics at the University of Minnesota.

recently conducted an intensive study of BuRec's impact on farm surplus problems. They found that BuRec-irrigated forage lowered not only forage prices, but also the income of non-Reclamation farmers.[13] They reasoned that increased forage production resulted in cheaper livestock feed, which resulted in greater livestock production, which in turn resulted in decreased livestock prices and farm incomes.

Howe and Easter's study points out only part of the forage surplus problem. Much of the livestock fed by this forage contributes to surplus crop problems in less direct ways. For example, every year the Department of Agriculture has to step in and boost the prices of butter, butter oil, cheese, milk, wool, and mohair. Thus, the forage supporting cows, sheep, and goats all contributes to price support costs through these livestock by-products.

Cereals: The administrative price support costs, as well as the loss in farm income for non-Reclamation farmers due to BuRec irrigation, are not limited to forage. Over 25% of all BuRec-irrigated land supports the growth of cereals such as barley, corn, and wheat. Unlike forage, cereals are treated as surplus crops by the Department of Agriculture. USDA's Commodity Credit Corporation (CCC) pays out nearly $50 million every year in price support and surplus.

grain storage programs for all the major cereals produced on BuRec land. Howe and Easter estimate that the CCC Programs for the corn, barley, sorghum, and wheat grown using BuRec water cost the taxpayer between $19 million and $50 million every year.[14]

The administrative costs of price supports and grain storage--suffered by all the Nation's taxpayers--are only part of the cost of BuRec efforts. Farmers all over the country--including those in the West—have been forced by excess production to sow fewer acres of corn. Meanwhile, BuRec irrigation projects have increased acreage for corn by 246,000 acres since 1944. Likewise, wheat production has increased by 152,000 acres on BuRec lands and declined everywhere else. Even barley acreage increased by 143,000 acres on BuRec lands with an accompanying decrease in barley acreage in the North and South.[15]

In short, BuRec-supported cereal crops appear to be growing at the expense of other farmers and at a direct annual cost to American taxpayers of as much as $50 million.

Field Crops: Similar drawbacks apply to field crops. The three major field crops, which use about 16% of all BuRec-irrigated land, are sugar beets, cotton, and beans—all of which also have an adverse effect on the national farm surplus problem.

The Department of Agriculture has attempted to cope with the cotton problem through both price supports and storage

programs. Howe and Easter estimate that price supports and USDA Commodity Credit programs for cotton grown with BuRec water have cost between $47 million and $104 million per year.[16] This bill is passed on to the taxpayers—not to BuRec project beneficiaries.

BuRec cotton production also hurt other cotton farmers—particularly in the South. Between 1944 and 1964, Southern cotton acreage dropped by one-third, while BuRec cotton acreage increased by almost 300%--or 369,000 acres.[17] This BuRec cotton competes directly with Southern cotton. In 1961-62, for example, "45% of the crop produced in California, Arizona, and New Mexico was shipped directly to southeastern textile mills."[18]

The effect of BuRec irrigation projects on edible and dry bean production is similar. As with cotton, the Department of Agriculture has to support bean prices and buy up the bean surplus. However, the main cost of BuRec bean production is not that of the surplus crop program, but rather the cost to other farmers. As BuRec supported bean production has risen, bean acreage on other farms has dwindled. Bean acreage declined by 10,000 acres in the North, by 10,000 acres in the South, and by 429,000 acres in the West between 1944 and 1964. But bean acreage on BuRec irrigated land doubled—the increase being 147,000 acres- in the same period.[19] In short, BuRec beans appear to be competing most directly with beans grown by other Western farmers.

Finally, over 500,000 acres of BuRec land is devoted to sugar beet production. The Department of Agriculture currently operates a Sugar Program designed to curtail excess sugar production. Sugar beet production on Reclamation-served land costs taxpayers $19 million annually in Sugar Act payments alone.[20] As a result, every additional sugar beet grown on U.S. soil hurts the taxpayer.*

Fruits, Nuts and Vegetables: The arguments made above about forage, cereals and field crops also apply to what BuRec calls "specialty" crops. Whenever they went in the Bureau of Reclamation, Task Force members heard the argument that BuRec irrigation is needed to produce "specialty crops" that cannot be grown without BuRec water. The following BuRec statement is typical:

> For the most part, Reclamation farms produce crops that can't be grown successfully in the West without irrigation water.[21]

Such alleged specialty crops include fruits, nuts, and vegetables.

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*In addition, Howe and Easter estimated that curtailed domestic sugar production and increased imports could save U.S. consumers "from 3.5 cents to 4 cents a pound in the short run and 1.5 cents to 3 cents in the long run." This means that with increased imports, households would have to pay only 50 cents for a five pound bag of sugar instead of the 65 cents that they are now paying.

About seven percent of BuRec land is used to grow fruits and nuts. The primary effect of this production has not been to contribute to Americans' food needs, but rather to put established fruit and nut growers out of business. Howe and Easter present the particulars concerning BuRec's performance:

> Between 1944-1964 the acreage of fruits and nuts fell 50 percent in the North and dropped by 6 percent in the South. In contrast to these declines, overall acreage in the West increased by 23,000 acres while the acreage on reclamation-served lands increased 237 percent or 270,000 acres. Hence, acreage in the nonreclamation West must have declined by 247,000 acres, or 13 percent.[22]

To a great extent, BuRec irrigation projects have affected vegetable production in a similar fashion. Between 1944 and 1964, vegetable acreage fell in both the North and South by over 500,000 acres in each area. Only in the West did the vegetable acreage increase. But even there, vegetable acreage declined on non-BuRec lands. On BuRec-irrigated lands, however, vegetable acreage (excluding potatoes) increased by 111,000 acres between 1944 and 1964 as BuRec farmers again profitted at the expense of farmers elsewhere.[23]

BuRec potato production is equally blameworthy. Howe and Easter concluded that BuRec potato production has significantly reduced incomes of non-BuRec farmers:

> Approximately $69 million of the $173 million decline in the farm value of potatoes can be attributed to increased production on lands served by reclamation...By lowering potato prices reclamation irrigation has substantially reduced the incomes of non-reclamation farmers.[24]

Thus, all BuRec vegetables--including potatoes--have brought substantial harm to previously existing American farms.

Yet the Bureau persists in claiming that these "specialty crops" cannot be grown without BuRec water. Surely, some of the 160 million acres of idle cropland elsewhere in the U.S. could be used to grow these so-called specialty crops. To resolve this controversy, we went to a leading U.S. agricultural economist--a man who has written or edited nine economic books in the last 14 years and who serves as an economic consultant for Resources for the Future. This outstanding expert, Marion Clawson, concluded:

> Land quality is somewhat better in some areas, but it's very hard to claim uniqueness. Maybe you can do this for artichokes in California, but by and large the Bureau's claims of uniqueness are nonsense.[25]

Other Miscellaneous Crops: The preceding sections have discussed all the crop varieties served by BuRec water except seeds and crops raised in family gardens and orchards. It is easy to cite the harmful impact of producing seeds for more alfalfa, sugar beets, and other crops shown in Table 2-A. Since too much of these crops is already being produced, there is certainly no need to have BuRec lands produce more seeds to raise even more excess crops.

The family garden problem is a little more difficult to deal with. It can be justly argued that family crops result in that much less food being bought in the stores, thus hurting the income of other farmers. However, since less than 1/400 of all BuRec land is used for family gardens

and orchards it is better to pass over these than to begrudge a person a few tomato plants in his back yard.

Total of Surplus Crops and Displaced Farmers

The direct costs of BuRec irrigation are quite substantial. In a 1959 study of BuRec programs, agricultural economist G.S. Tolley found that the repercussions of BuRec projects were so great that "it may be that one farm worker for every twenty remaining in southern agriculture has been displaced by federal reclamation."[26]

A more recent study by Howe and Easter concluded:

> In terms of land held in retirement, reclamation has probably replaced 5-18 million acres elsewhere.[27]

The pervasive impact that this has had on America's farmers cannot be overemphasized. Perhaps as many as 180,000 farm workers have been driven from their jobs as a result of BuRec's short-sighted policies.* Nevertheless, BuRec has obliviously plowed ahead with its irrigation efforts, aggravating the problem even further.

BuRec irrigation has also placed a heavy burden on the American taxpayers. USDA programs for the cotton, wheat, feed grains, and sugar produced on BuRec-served land cost American

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*Based on information supplied by USDA estimating that there is an average of one farm worker per 100 acres of active cropland.

taxpayers between $129 million and $258 million annually.[28] And this is only part of the direct cost. Price support costs for BuRec-supported beans, mohair, wool, butter and other crops cost taxpayers millions more annually in direct USDA outlays. In essence, every time BuRec increases its "irrigation benefits," Americans actually suffer increased irrigation costs.

BuRec's Rebuttal

Reclamation Commissioner Ellis A. Armstrong spoke for the Bureau's position in the following exchange at recent Congressional hearings:

> Mr. Evins.[Rep. Joe L. Evins (D-Tenn)]: What answer could one give those who question spending money to irrigate land, at the same time the Agriculture Department is paying people to keep land out of production?
> Mr. Armstrong: As I pointed out in my slides, the major portion of the production of irrigated lands is that which doesn't contribute to agricultural surplus as except for a small proportion of forage and feed grains. Where those are produced they are largely used for beef production. If they weren't produced in that area there would not be nearly as much beef production because of the location and high transportation costs.
> Further, one of the things I think is quite important is insurance, the stability you have with irrigated agriculture. We have been quite fortunate now for a number of years in the drought situation. We haven't had a worldwide drought for quite a number of years. When something of this nature occurs, it is good to have assured production.[29]

Mr. Armstrong's answer to the irrigation question is no answer at all. The Task Force takes exception to Commissioner Armstrong's response for several reasons. First of all, he sidestepped the crucial issue. Regardless of other issues,

as long as over one-third of the Nation's cropland (160 million acres) remains idle, with the prospect of more farmland being retired in the future, why does the Nation need more irrigated land? The Task Force maintains that it does not.

Second, it is not true—as Mr. Armstrong suggests—that BuRec programs are responsible for only a small portion of crop surpluses. As demonstrated earlier, over 52% of BuRec crops (i.e., cereals, beans, cotton, and sugar) contribute directly to either the Sugar Program payments or USDA price support and surplus crop storage programs. The Task Force maintains that all BuRec production of such crops should be considered surplus.

Through a bit of statistical finagling BuRec officials have managed to come up with very low estimates of the Bureau's contribution to the surplus crop problem: wheat—2.2% of the surplus, corn—0.73% of the surplus, upland cotton—4.1% of the surplus, and grain sorghum—0.34% of the surplus. BuRec's method for determining these figures is fallacious, however. Upland cotton, for example, is said to contribute 4.1% of the surplus, since 4.1% of the upland cotton produced in the U.S. depends on BuRec water.

A more appropriate procedure would be to consider all (100%) of the incremental cotton production on BuRec lands as surplus. Professor Otto Eckstein, later a member of President Johnson's Council of Economic Advisers, reached a similar conclusion in 1958:

> But the output on irrigated land should really be considered incremental for the country as a whole. If a crop is in surplus, all of the extra output caused by irrigation must be considered to add to the surplus, not just a proportionate share.[30]

For over a decade since Professor Eckstein published his analysis, BuRec officials have ignored his suggestion; they deliberately continue to use fallacious surplus crop estimates which distort and understate the Bureau's contribution to the crop surplus problem. We are forced to conclude that all those BuRec crops (utilizing 42% of BuRec land) that are covered by various USDA surplus crop programs should be considered surplus.

However, this is not the end of the surplus problem. As discussed earlier, forage contributes indirectly to surpluses by providing livestock feed for animals producing wool, mohair, milk, etc.--all of which are covered by various price support programs. Finally, the remaining crops--even though not covered by USDA support programs--are in surplus in the sense that BuRec production of each of these crops displaces production of these farm goods elsewhere and causes a subsequent loss of income to other farmers--Reclamation has already displaced as many as 180,000 former farmers.

Thus, virtually all BuRec supported crops are excess. To say, as does Commissioner Armstrong, that the "major portion" of BuRec supported crops are <u>not</u> excess is a blatant distortion of the facts.

A final objection to Commissioner Armstrong's testimony relates to the problem of drought. Let us recall for a moment the exact words uttered by Commissioner Armstrong:

> We have been quite fortunate now for a number of years in the drought situation. We haven't had a worldwide drought for quite a number of years. When something of this nature occurs, it is good to have assured production.[31]

The Task Force was somewhat intrigued by Mr. Armstrong's discussion of a worldwide drought. To determine the frequency of such phenomena, we contacted the drought experts at the Environmental Data Service (EDS) of the Department of Commerce.[32] Much to our surprise, there has never in recorded human history been what they would call a worldwide drought. In fact, meterologists think the term "worldwide drought" is an improper description of any actual or potential scientific phenomena. When we then asked about the frequency of "nationwide" droughts, we learned that it is also misleading to refer to any drought in our history as "nationwide," although the Dustbowl of 1934 and 1936 was indeed extensive. Nevertheless, according to EDS, even if we suffered an equally wide-ranging drought today- which is highly improbable--"the impact on our total national farm production would not be as severe as it was in the '30's."[33] For one thing, advanced farm technology can compensate for reduced rainfall by growing more crops per acre where conditions permit. Second, we already have plenty of irrigated land to assure continued crop production; and finally, we now have

millions of acres of land throughout the U.S. lying idle which could be brought into production if the only available water were in their region.

In retreat, BuRec says that it is shifting its projects away from irrigation. While the Bureau spent 97% of its resources and efforts on irrigation in its first decade, it claims that now only 40% of its total appropriations and allotments have gone to irrigation.[34] Yet an analysis of the $5.5 billion backlog of authorized facilities BuRec is fighting to complete, indicates that irrigation is still the primary element in current and prospective reclamation projects.*

Under the FY'71 budget, 26 projects or major project units with a total balance to complete of over $2 billion were not yet under construction.** Twenty-three of these are predominantly irrigation projects; in fact, $1.2 billion or 55% of the total cost of these unstarted projects is allocated to irrigation. Projects with partial construction need nearly $3.5 billion more to be completed*** It is difficult to be certain how much of this balance to complete represents new irrigation costs. Nevertheless, we know from Table 2-C that there are four project units with some construction (5% or less) which have yet to spend nearly $1 billion for irrigation;

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*See Tables 2-B and 2-C. A similar analysis of the 39 reconnaissance studies and 57 feasibility investigations described in BuRec's FY'72 Budget submission to Congress shows that about 1/2 of the reconnaissance studies and the overwhelming majority of the feasibility investigations still focus largely on irrigation.

**See Table 2-B

***See Table 2-C

and another project with only 11% constructed has over $203 million more allocated to irrigation. If all of these irrigation "benefits" were excluded as they should be, the benefit-cost ratio for most of these projects would dip below unity and our economy would be spared the burden of these costly and counterproductive undertakings.

Recommendations

The Task Force recommends that the billions of dollars of backlogged projects either awaiting construction funds or currently under construction be re-evaluated, giving zero benefits to irrigation. Since the bulk of the benefits claimed for these forthcoming projects are irrigation benefits, most of these projects no longer will pass the economic feasibility test. Moreover, the few projects that do survive will be substantially changed as water earmarked for irrigation should become available for water quality needs as well as for municipal and industrial water supplies. The original task of the Bureau of Reclamation--irrigation--has long since been completed. At least in the area of irrigation, BuRec's time has passed.*

* * * * * * *

*It should be noted that the analysis in this chapter was based on the assumption that the Dept. of Agriculture would continue its price support program, as well as its various crop and acreage limitations. Ideally, such restraints on the farm economy should be eliminated--at least from the standpoint of economic efficiency. Under such circumstances, the drop in crop prices would more than offset any increase in crops sold so that the Bureau of Reclamation still would be able to claim only negligible benefits for its irrigation. In addition, there would still be the displacement effect of BuRec irrigation as other non-Reclamation farmers are driven out of business. Finally, if we were to return to free competition for farm goods, the whole concept of a highly subsidized irrigation effort operated by BuRec would be jeopardized.

CHAPTER 6

HIDDEN SUBSIDIES

> Some large farmers push for irrigation projects even though their farms are too large to benefit from the irrigation water. They're just concerned about the public interest. It really restores your faith in democracy and human nature. It really gives you a good feeling inside.[1]
>
> --Loren Holt, Economics Branch, Bureau of Reclamation

> The owners of the big estates cannot get what they want by State action alone. They also need Federal help, and they think they can come to Washington, with no one greatly concerned over the issue and push their proposal through Congress on favorable terms to themselves.[2]
>
> --The former U.S. Senator Paul Douglas

I. TRICKY ACCOUNTING

Commissioner Armstrong likes to boast that "Reclamation projects, to a large extent, pay their way."[3] In reality, BuRec projects do no such thing. Although Bureau officials frequently and repeatedly tout repayment as a virtue of Reclamation projects, BuRec repayment schemes actually hide enormous subsidies.

In order to gain Congressional authorization of a project, the Bureau must demonstrate that project beneficiaries are able to repay all "reimbursable costs." BuRec labels most project costs as "reimbursable," including irrigation, electric power, and municipal and industrial water supply.

As the first step in measuring project repayment capacity, the Bureau determines the amount of project costs which are to

be repaid by the beneficiaries of each project function. To accomplish this cost distribution, BuRec uses the "separable costs-remaining benefits" method. As the name suggests, the extent to which this method allocates project costs equitably depends on the accuracy of the original project benefit estimates.* Since BuRec's benefit estimates bear little resemblance to the actual benefits accruing, as the Task Force demonstrated in Chapters 2, 3, and 4, it is unfortunate that BuRec relies on them in allocating costs for repayment.

Having made such distorted cost allocations for different project purposes, the Bureau of Reclamation then assigns repayment obligations to the project beneficiaries. It is in this latter phase of the process that BuRec buries the biggest subsidies in complicated accounting procedures. Who receives these subsidies? How big are they? And how are they hidden?

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*The operation of the "separable costs-remaining benefits" method is explained in the Reclamation Instruction manual:

> In this method each project purpose is assigned its separable cost [cost which could be omitted from the project if the purpose were excluded] plus a share of joint costs proportionate to the remainders found by deducting the separable cost of each purpose from the justifiable expenditure for that purpose.[4]

The "justifiable expenditure" is defined as the lesser of the benefits for a given purpose and the alternative cost of a single-purpose project to obtain the same benefit.

Irrigation Subsidies

The history of irrigation project repayment is a story of increasing subsidization. The Reclamation Act of 1902 required recipients of project irrigation water to repay the construction costs in ten annual interest-free installments.[5] When ten years proved to be too short a period for the farmers to repay these costs, Congress lengthened the irrigation repayment period to twenty years, through the Reclamation Extension Act of 1914.[6] Since the irrigators were still unable to meet their repayment obligations, the Fact Finders' Act of 1924[7] authorized the use of Reclamation power revenues to subsidize project irrigation costs. Even with such direct assistance, the irrigation repayment period had to be extended to 40 years by the Omnibus Adjustment Act of 1926.[8] The Reclamation Project Act of 1939 authorized irrigators to use project water for ten years following project construction before even beginning their 40-year repayment obligation.[9] Present Reclamation policy continues the 10-year period, but has extended the interest-free repayment period to 50 years.[10] Thus, Reclamation projects offer irrigators two types of subsidies--direct revenue transfers from other project functions and a subsidy resulting from the long-term interest-free obligations.

Direct Revenue Transfers: The most obvious of the two subsidies is the direct transfer of electric power revenues and municipal and industrial water revenues to repay costs assigned to the irrigators. Although BuRec allocates the bulk of project

costs to irrigation, it does not assign this whole burden to the farmers who will benefit from project water. Instead, the Bureau determines the amount per-acre which an average farmer in the project area can afford to pay toward construction costs; BuRec then multiplies this amount by the number of acres in the area to be irrigated to arrive at the total sum to charge the irrigators.

For example, the Bonneville Unit of the Central Utah Project has allocated $220,409,000 (or $1,408 per acre) to irrigation out of a total project cost of $413,250,000. Yet BuRec has assigned only about $16,400,000 (or $2.10 per acre x 50 years x 156,530 acres) to irrigators for repayment.[11] Hence, the irrigators get a direct capital subsidy at the outset of $1,303 per acre, or a total of over $204 million for all the irrigated farmland in the project area. Collection of a special property tax (an ad valorem tax) is expected to return $64,691,000, or $243 per acre of this initial capital subsidy. Of course, whatever share of this tax the irrigators pay reduces their subsidy accordingly; but in no case will the average direct revenue transfer subsidy to irrigators in the Bonneville Unit fall below $1,060 per acre.*

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*In arriving at this $1,060 per acre direct transfer subsidy we recognized the fact that costs allocated to irrigators may overstate somewhat the direct subsidy. Currently, irrigators are assigned all separable project costs, plus a proportion of all remaining nonseparable costs---where the proportion depends on the amount of irrigation benefits. Since the irrigation benefits category includes secondary irrigation benefits that don't directly increase farmer income, the resulting portion of costs allocated to irrigation should instead be distributed among all the project purposes in proportion to the amount of benefits claimed. Our analytic neglect of this secondary benefit problem results in a slight upward bias in the subsidy figure which should

This example of a direct transfer subsidy is not extreme or unusual. In fact, Senator Allen J. Ellender (D-La.), Chairman of the Senate Appropriations Committee, discovered during recent hearings that 10 new Reclamation projects are costing $1,045 to $2,803 per acre to irrigate while the farmers themselves are repaying as little as $77 per acre. (See Table 6-A).

To make these direct transfer subsidies, BuRec depends heavily on the use of revenues from its hydroelectric power plants. For the 23 projects listed in the BuRec publication, Power Systems: Average Rate and Repayment Studies, FY 1969, $1,420,705,465 in repayment aid to irrigation was given from power revenues.[12] Future transfers of power revenues make this $1.4 billion figure seem insignificant by comparison. For the Central Utah and Deedskadee Participating Projects of the Colorado River Storage Project, BuRec has apportioned over $1 billion of future power revenues for irrigation assistance;[13] for the Missouri River Basin Project, it has apportioned over $2 billion worth.[14]

BuRec officials frequently claim that it is only right for power and municipal and industrial water users to subsidize irrigation costs since they supposedly reap indirect benefits from irrigation. Or, in the words of Reclamation Commissioner Ellis Armstrong:

> By participating in irrigation repayment, the power user, the user of municipal and industrial water, and the payer of ad valorem taxes, contribute to social payout in return for the economic and social benefits they receive.[15]

Armstrong's logic is deficient in several respects. Admittedly, there are some regional benefits from BuRec projects. BuRec irrigation probably helps expand local economies, thus helping power users and others in the same project area. By the same token, however, electric power and municipal water provisions promote regional growth, thus increasing the local markets in which BuRec irrigators can sell their goods. Thus, the indirect benefits work both ways. It is unclear that power users are receiving more regional benefits from irrigation than irrigators are receiving from electric power.

Furthermore, power revenues from a project located hundreds of miles away often are used to subsidize irrigation costs. BuRec uses revenues from projects, which produce power or M&I revenues in excess of their repayment obligations, to help repay irrigation costs for basin projects that are often several states away. Such basin accounts, for example, are in operation for the Central Valley Project, the Upper Colorado River Storage Project, the Colorado River Basin Project, and the Missouri River Basin Project.* This use of basin accounts gives the illusion that a project is paying for itself when, in fact, it is being subsidized by other projects in the basin. The distant power users who help pay this subsidy to irrigators experience virtually no indirect effects of BuRec projects except the displacement effect of BuRec agriculture on farmers in their region. In short, there is little or no justification for irrigators to be subsidized by power and municipal and industrial water users.

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*The Missouri River Basin extends into ten states, seven of

To get a feeling for the extent of the interest subsidy over the entire repayment period, consider the following example. Suppose that there are no interest costs during project construction* and that irrigation repayment begins ten years after the original outlay of construction funds. Also suppose that the irrigators will repay their obligation in equally sized annual installments over a 40-year period. If an irrigator repays a reimbursable cost of $100 per acre in the above fashion, then he really is repaying an amount with a present value of $9.42.** Thus, irrigators are getting a 91 percent interest subsidy on their repayment obligation. It should be noted that this 91 percent figure is very conservative. The example used assumed that the repayment period began 10 years after project funding instead of the 60 years required in the Missouri River Basin area. Moreover, irrigators were assumed to repay their obligation in 40 years--ten years faster than required. These two biases in BuRec's favor make 91 percent a conservative estimate of the hidden interest subsidy given to irrigators.

While the hidden subsidies to irrigators vary from project to project, the Task Force devised a general formula for finding them. First look for the direct transfer subsidy, that is, the cost allocated to irrigation minus the irrigators' repayment obligation minus the ad valorem tax. Next, add to this direct

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*An equivalent assumption is that project construction is instantaneous.

**Present value was computed using a ten percent interest rate.

transfer figure 91% of the irrigators' remaining repayment obligation, which represents the interest rate subsidy. These numbers can be calculated on either a per acre or project-wide basis.

Using this formula for the Bonneville Unit, the Task Force found a total subsidy of $1156 per acre or $235,333,000 for the whole project area.* To find the annual subsidy, we divided this per acre total by a factor of 9.91 which we got by assuming the total subsidy was taken over a 50 year period and discounted at a rate of 10% to its present value. So the annual subsidy to irrigators getting water from the Bonneville Unit will be about $117 per acre or a total of $23,750,151.

Economists Howe and Easter in a recent study for Resources for the Future found comparable figures. They noted that Western farmers served by BuRec water pay $35-$135 less per acre per year than the full cost of supplying the water.[18] If computed for a 50-year period and discounted to its present value, this yearly subsidy range would yield a total over the 50-year assumed life of the project of $347 to $1133 per acre.

*	Per Acre		PROJECT Total	
1) Plus	$1,408	or	$220,409,000	allocated to irrigation
2) Minus	105	or	16,400,000	irrigators repayment
3) Minus	243	or	64,691,000	ad valorem
4) Plus	96	or	14,927,000	interest subsidy
	(91% of $105)		(91% of $16,400,000)	
	$1156		$235,333,000	total subsidy

Lines 1), 2), and 3) are used to compute the direct transfer while line 4) represents the interest subsidy.

Several observations should be made at this point. The fact that irrigators have consistently fallen short of their interest-free repayment obligations, which can be paid off with money worth only a fraction of the initial obligation, implies that either irrigation benefits have been grossly overestimated or BuRec farmers are reaping a huge profit. Whether irrigators are able to fully capitalize on all of this subsidy is really a peripheral consideration. The crucial point is that the taxpayer--not the irrigator--bears the huge cost of BuRec irrigation facilities.

Subsidies To Other Beneficiaries

Even though power and M&I revenues help pay for irrigation construction costs, power and M&I users may still get a subsidy of their own. In addition to subsidizing irrigators, the power and M&I beneficiaries have to repay their repayment with interest. But the interest rate is so low as to substantially understate the true cost to society of building these projects. The General Accounting Office reached the same conclusion:

> GAO found that the interest rate criteria used by federal agencies in determining the cost of financing the Federal power program result in the use of interest rates that are not representative of the cost of funds borrowed by the Treasury during the period of construction of a power project.[19]

The Bureau of Reclamation is particularly guilty of understating this interest rate. The Comptroller General of the United States pointed out in a 1970 GAO report that "unless legislation

directed otherwise, the Bureau of Reclamation has used a 3-percent interest rate...."[20] Examples of projects using the three percent rate are: the Boise Project, Minidoka Project, Columbia Basin (Grand Coulee Dam), Hungry Horse Project, Palisades Project, and the Yakima-Roza Division.[21] The only major exceptions to this practice are the Yakima-Kennewick Division power project (2.5%) and the Grand Coulee Third Powerplant (3.125%).[22] As a result of these low interest rates, power and M&I users may get enough of a hidden subsidy on some projects to outweigh the share of irrigation costs they must repay. In either case, however, the federal taxpayers are subsidizing the projects as a whole.

Recommendations

Although there is no panacea to this complex problem, some constructive suggestions can be made. First, all subsidies should either be abolished or made openly. Direct project beneficiaries should be required to pay all of the reimbursable costs with interest for the project outputs they receive; if Congress wants to subsidize needy beneficiaries they should do so more candidly and without loopholes and smokescreens that hide the subsidies to the undeserving few. Project costs should include an annually compounded interest charge computed using an interest rate equal to the discount rate. All transfers of power revenues and municipal and industrial water revenues to help pay off irrigation costs should be prohibited. Finally, the General Accounting Office should be funded to do more comprehensive

tudies of BuRec projects and given the authority to determine he repayment obligation of the beneficiaries in cases where uRec does not do so appropriately. The Task Force is merely sking BuRec to stop hiding its subsidy of the few at the xpense of the many.

I. 160-ACRE LIMITATION AND EXCESS LAND LAW

> I grant you, you start kicking the 160-acre limitation and it is like inspecting the rear end of a mule: You want to do it from a safe distance because you might get kicked through the side of the barn.[23]
>
> --Senator Claire Engle

While all irrigators receive special subsidies through uRec's repayment practices, only a few of them receive the argest share of this enormous hidden payout. BuRec is again o blame for this inequitable distribution of Reclamation roject windfalls. Through lax and ineffective enforcement, uRec has enabled certain large-scale irrigators to evade the 60-acre limitation on farms receiving BuRec water.

Statement, Meaning, and Purpose of the Excess Land Law

Initially, Congress hoped to promote homesteading and he development of the West by limiting the acreage of farms ligible to receive BuRec irrigation water. First incorpo- ated in the 1902 Reclamation Act, the excess land law pre- cribes:

> No right to the use of water for land in private ownership shall be sold for a tract exceeding 160 acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood [i.e., within 50 miles]...[24]

In 1914, Congress added an anti-land speculation provision requiring that no contract be let or construction started on any federal Reclamation project until the owners of excess land within the project area agreed to dispose of their excess land holdings at the value it would have been worth, if the Government had not decided to build an irrigation project.[25] Congress intended by this provision to prevent large landowners and speculators from capitalizing on any unearned increment which would result, or had already resulted, from the federal investment in the project.

To tighten the language of the excess land law and to facilitate effective enforcement, Congress included a new provision in the Omnibus Adjustment Act of 1926. After 1926, excess lands could legally become eligible to receive Reclamation project water only if the landowner executed a recordable contract with the United States, obligating him to sell his excess lands at appraised prices excluding incremental values added by the proposed Reclamation project. The Act stated explicitly that "no such excess lands held shall receive water from any project or division if the owners thereof refuse to execute valid recordable contracts...."[26] However, the law did not clearly stipulate when the excess land must be

old; consequently the Secretary of Interior etermined that it must be within 10 years from signing the ontract, and that he had a power-of-attorney to sell it, f the owner defaulted on the contract.[27*]

All of these early provisions have been carried forward nd reaffirmed in recent Reclamation laws and decisions. In 1958 opinion, the Supreme Court gave a clear summation of he purpose of these laws:

> ...the claim of discrimination in the 160-acre limitation, we believe...overlooks the purpose for which the project was designed. The project was designed to benefit people not land. It is a reasonable classification to limit the amount of project water available to each individual in order that benefits may be distributed in accordance with the greatest good to the greatest number of individuals. The limitation insures that this enormous expenditure will not go in disproportionate share to a few individuals with large land holdings. Moreover, it prevents the use of the federal reclamation service for speculative purposes.[29]

Interpretation and Enforcement

While the purpose of these laws may now be clear, the nterpretation and enforcement of all their provisions is not. ow do BuRec and the courts define "any one landowner?" How o they read the anti-speculation clauses, including the esidency requirement, and the pre-project appraisal stipu- ation? Is the law of the land being enforced or evaded?

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*The Secretary of Interior has used this power of attorney nly once, although as of December 31, 1970, there were 9,501 cres under the Secretary's power of attorney since the owners ave failed or refused to sell their land as promised--yet hey continue to receive water.[28]

"Any one landowner" does not mean "any one person." A husband and wife, for example, may each own 160 acres that are eligible for BuRec water. They may even give ownership of parts of their farms to their children so that a 640-acre or larger farm will be eligible for subsidized water from a Reclamation project. With an annual subsidy of $35 to $135 per acre,* each 160-acre landowner can rake in from $5,000 to $20,000 per year. A family of four may get from over $20,000 to over $80,000 per year--well above President Nixon's proposed guaranteed minimum family income!

Similarly, a family or close-held corporation** can divide its landholdings into several eligible blocks as long as it adheres to three rules by which multiple ownership using the corporate device are to be tested. These rules are:

> 1. No corporation may own more than 160 acres in a single Reclamation project as eligible land for project water.
>
> 2. The corporate farm may be disregarded to determine whether any stockholder, as a beneficial owner of a pro rata [proportional] share of the corporate land holdings owns land in excess of 160 acres.
>
> 3. The corporation must not have been created for the primary purpose of avoiding application of the excess land laws.[30]

If all three of these rules were enforced, corporate farmers would have difficulty hiding their evasion of the 160-acre limitation behind a facade of corporate fronts. But BuRec

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*These figures were noted by Howe and Easter and described in the previous section

**A close-held corporation has only a few shareholders, usually from the same family, who own and control the operation.

refers to give them cover by effectively ignoring the hird rule, as illustrated in a recent case.

In early 1965, the A. Perelli-Minetti Corporation broke p its 1,909-acre holding into 26 separate corporations, with different former stockholder owning each new corporation. ince each of the new corporate entities has less than 160 cres and is technically owned by a single stockholder who oesn't "own" any other project lands, each new corporation s eligible for project water. According to J. Lane Morthland, nterior Department's Associate Solicitor for Reclamation and ower:

> The fact that each of the new corporations has identical officers and boards of directors at this time is unimportant....The identity of officers and directors goes to the question of operation and management and not to ownership.[31]

he fact that the total acreage continues to be operated as unit under essentially the same management and in the same anner as before it was divided, is also ignored.

Mr. Morthland concluded that fraud is the only grounds or invoking the third rule. He did not find fraud in the act that the owners of this corporate farm of nearly 2,000 cres rearranged its corporate structure in order to receive a ubsidy of from $70,000 to $270,000 per year!* If the erelli-Minetti corporation didn't defraud the public of hese funds, then the Department of Interior did.

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*The figures are based on the same $35-$135 per acre annual ubsidy noted by Howe and Easter and described in the previous ection of this chapter.

Publicly owned corporations and large individual landowners can't use the type of cover the Perelli-Minetti Corporation used, since the second rule applies only to family and close-held corporations. It is too difficult to identify all the ultimate owners of a large publicly owned corporation; and the second rule was never meant to apply to individually-owned land. Instead these land barons have other methods of evading the 160-acre limitation and hiding the huge subsidies they get from reclamation project.

First, they get outright exemptions from the law. The private land residency requirement of the 1902 Reclamation Act has "long been discarded;"[32] although one long-time corruption fighter, Ben Yellen, has sued in California to get the residency requirement enforced. If Ben Yellen wins and if Congress doesn't then pass a law repealing the residency requirement, his victory could drive out the big growers in California. One official involved in the case admitted, "Interior is scared stiff; we're going all out on this one because if Yellen wins, all hell could break loose."[33]

Other exemptions have been granted by legislative or administrative fiat to special irrigation districts. A 1971 unpublished report from the Bureau of Relcamation describes 24 different exemptions, modifications, waivers, and special provisions applicable to the excess land laws.[34] These exemptions cover a total of 2,022,500 acres of land.[35]

For example, in the Small Projects Reclamation Act, large landown-
rs succeeded in obtaining the privilege, known as the Engle
ormula, of making interest payments in lieu of other compli-
nce with acreage limitations. That is, as long as the big
andowner pays back the cost of construction with a low
nterest rate, he can receive project water for as many
cres as he desires.[36]*

Large landowners on the Kings and Kern Rivers and at the
an Luis Project have also sought Congressional and administra-
ive acceptance of full payment of their repayment contracts
s a means of discharging their obligations to comply with
he 160-acre limitation. According to Paul S. Taylor, Professor
meritus of Economics at Berkeley, former consultant to the
ureau of Reclamation and author of numerous law review
rticles on the 160-acre limitation issue:

> The demand of excess landholders that full payment be accepted as "full satisfaction" of acreage limitation, is a spurious claim that final payment of a fraction of the construction cost should extinguish a public policy that does not depend on cash.[38]

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*In addition to this privilege, the Small Reclamation
rojects Act provides interest-free loans for private
rrigation of less than 160 acres.[37] Such loans follow
he simple formula of no money down, 50 years to repay, and
o interest--a far cry from the annual 18% rate consumers pay
or Master Charge privileges. To date, BuRec has made
ver $157 million of these no or low interest and long
erm loans to private individuals and groups for private
rojects specifically benefitting only these private
nterests.

Even when large landholders can't get some kind of exemption from the 160-acre limitation, they still have plenty of ways to circumvent the law and reap undeserved and excessive benefits from Reclamation projects. Although the 1914 law specifically required excess landowners to negotiate recordable contracts even before construction begins, in practice the Department of Interior ignores this stipulation and says that the excess landowner "must volunteer" and "has an unlimited time" to sign--or not to sign a recordable contract.[39] On all BuRec projects there are less than 800 recordable contracts covering 164,000 acres of excess land. About 65,000 acres of this has actually been sold and an additional 992,250 acres of excess land in project areas is not even under contract.[40]

The Bureau also ignores the 1926 statute that prohibits giving <u>any</u> water to landowners who refuse to place their excess land under recordable contract for sale. BuRec even gave away $14 million worth of Shasta Dam water before signing any contracts at all. As Table 6-B illustrates, many big landowners in the Westlands Irrigation District are receiving BuRec water in spite of the fact that little--or none--of their excess lands are under recordable contract.

Furthermore, over 60 excess landowners receive BuRec water on several 160-acre plots within the same project or division. For example, Southern Pacific gets Central Valley Project (CVP) water from five districts besides Westlands.[41]

If they get the 160-acre minimum irrigated in each district they get a total annual subsidy from $28,000 to over $100,000.* By administering the excess land law on a contract-wide rather than a project-wide basis, BuRec permits these excess landowners to split up their holdings so that they have several "eligible" 160-acre plots and hence can circumvent the intent of the law.

In addition to permitting this blatant evasion of the law, BuRec participated in a more subtle give-away of federally subsidized water. While the Bureau of Reclamation concedes that the 160-acre limitation applies to surface deliveries of project water, it argues that the excess land law does not apply to pumping of underground waters that have been improved by deep percolation losses from surface water applications--including surface applications of project water.[42] In short, owners of ineligible excess lands get a water-windfall from the raising of the underground water level due to the federal water project. This water "gimmick" or "steal" in Senator Wayne Morse's words,[43] persists to this day.

Even those landholders who do execute recordable contracts have nothing to lose--and everything to gain. Those excess lands under a recordable contract are still eligible to receive subsidized water for up to ten years before they must be sold. And the value of this subsidy is considerable.

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*Again these figures are based on Howe and Easter's $35-$135 figures developed in the previous section.

Take Anderson Clayton & Co., noted in Table 6-B, for example, which has over 25,000 acres under recordable contract. These excess lands under recordable contract receive a direct subsidy of over $2 million per year in cheap water. No wonder Harry Horton, a lawyer for big Southern California growers, stated:

> I will give you my own opinion of Jack O'Neill's [a big landowner in the Westlands District of the San Luis project] willingness to sign the 160-acre limitation. He thinks if he gets water for ten years on there without having to sell, he can make enough money out of it so he can afford to sell the land at any old price.[44]

But Jack O'Neill and other big landowners don't have to sell their excess land at "any old price." The Bureau's assessment policies see to that. Instead of appraising land values prior to project construction and without project benefits as the law requires, the Bureau's trick is to compare land receiving project water with nearby land not receiving the water, claiming that the difference in sales price represents the project's value to the land. But San Luis has helped non-project land in the area a great deal by replenishing their fast-dwindling groundwater supply, by raising its value, and by relieving the general demand for its water. The Bureau's assessment technique permits O'Neill and associates to cash in on an unearned increment in land value created by the San Luis Project, contrary to the intent of federal law.

In one example given by a Westlands realtor, Jack Molsebergen,[45] the Bureau approved the sale of land for $425 an acre.* Its appraised value at the time of sale was $450, but the Bureau considered that $25 worth of value came from the San Luis Project, and in conformity with the law requiring sale at pre-water prices, marked the land down to $425. In other words, by the Bureau's own straight-faced estimate, the United States was spending nearly $1,000 an acre to confer benefits which it valued at only $25 an acre.[46]

Of course, the Bureau's $25 figure was phony, and anyone selling for $425 an acre receives an unearned incremental land value added by the project. In 1960, the land cost $150 and its value was declining rapidly as groundwater levels plummetted from over-pumping. Westlands was "mining" 900,000 acre-feet a year from a basin with an estimated replenishable yield of 190,000 acre feet, dropping pumping levels ten feet a year. The San Luis Project is the only change throughout Westlands since 1960 that could possibly affect land values.[47] Even adding a factor for inflation, based on the average increase of all farms during the period, the Task Force calculated that the land would yield a price of only $190 by the time of its sale in 1968. But with the water levels dropping it probably wouldn't have been worth $100 an acre without the project.

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*One Bureau official indicated that Westlands land values range from about $400-$1,000 per acre, so the example we are using is on the low end of the spectrum.

In fact, sales figures in Westlands show an appreciation of about $300 an acre*. Using Table 6-B, this confers a potential windfall of more than $23.5 million on the Southern Pacific Co.; $13.4 million for the Giffens; nearly $7 million for Boswell's Boston Ranch; and over $9 million for the Anderson, Clayton, Co. The District's total land value has increased over $167 million (again see Table 6-B). This is the capitalized value of the subsidized water, which the law is supposed to prohibit large landowners and speculators from getting.

By permitting a high selling price like $425 per acre, BuRec sometimes gives the landowners a way to avoid selling at all. Since the fraudulent assessment technique of the Bureau puts the post-subsidy land value in the "pre-subsidy assessment" for sales purposes, no one wants to buy. So the large landowners in Westlands, some of whom, like Southern Pacific, never wanted to sell in the first place, get to keep their land and the subsidies that go with it, while theoretically complying with the 160-acre limitation--at least as the Bureau applies it.

* * * *

The Westlands case discussed above is the most conspicuous** and well documented example of how large landowners

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*The $300 figure is less than our computations in Table 6-B showing a total subsidy of $847 per acre, since land owners could only capitalize on part of the total.

**It is true that Westlands has about 1/3 of all the excess acreage on Bureau projects; but there are still over 858,000 acres of excess lands outside Westlands.

circumvent the excess land law with BuRec's help. Unfortunately, there is no way to determine whether similar evasion takes place on other project areas. BuRec did not have--or at least would not admit to having--the information they would need to enforce the law effectively. The data they did have on Westlands were incredibly difficult to dig out and organize; and the data they have on other projects are even more fragmentary, confusing, and largely irrelevant.

Why doesn't BuRec have a readily available list even more detailed than Table 6-B covering each and every project or major unit and each and every excess landowner. More important, why don't they know how much subsidy is in each acre-foot of water they distribute and exactly how much water (and hence subsidy) each individual landowner receives--by name? If public welfare recipients must give much more detailed and personal information to qualify for meager benefits, why shouldn't the few big irrigators who soak the government for millions of dollars be required to give their names and the amount of federally subsidized water they receive. At least, Congress is entitled to a list of all the landowners receiving BuRec water, the estimated subsidy per acre-foot of this water, and the total amount of water and subsidy they receive.

Then Congress can better evaluate where the excess land law is being evaded and where profiteers are receiving excessive and undeserved benefits.

The Bureau also fails to give enforcement of the law a high priority. They have less than 25 people working on the problem and only six are technically full-time compliance officers.[48] Worse still, the Bureau has never cut off water as a penalty for violation of the law, so irrigators know they can evade it with impunity.

Recommendations

Without taking a position on the current debate over whether 160 acres is still a viable size for profitable farm operations,* the Task Force supports the continuation of a low-acre limitation--if for no other reason than to set a limit on the federal subsidy one landowner can receive from a Reclamation project. In fact, we recommend that Congress revise the excess land laws so that one landowner cannot receive BuRec water for more than 160 acres--counting water received from all BuRec projects. To be effective the excess land law must at least be more vigorously enforced.

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*Governor Reagan's Special Task on the Acreage Limitation Problem recommended that the federal excess land provisions be raised to 640 acres; but others such as Bill Kinsey, agricultural economist with Stanford University's Food Research Institute, and Paul Taylor, Professor Emeritus of Economics at Berkeley and noted expert on the 160-acre limitation, strongly disagree.

If BuRec really wanted to enforce the law, they would buy up the excess land themselves before building the project and either lease or resell it at cut-rate prices to small land operators or sell it at the market price, which would include the capitalized value of the project water subsidy. The Government--rather than private profiteers--would then receive the "unearned increment" which it could use to help the hard-pressed Treasury or redistribute in the form of other Government programs, such as education or conservation efforts. Representatives Robert Kastenmeier (D-Wis), Jerome Waldie (D-Calif), Ronald Dellums (D-Calif), Don Edwards (D-Calif), George Danielson (D-Calif), John McFall (D-Calif) and Edward Roybal (D-Calif) have introduced legislation to achieve this objective. These proposals are supported by labor groups, conservationists and educators.

At the very least, the Secretary of Interior should require that all excess landholders sign recordable contracts before the project is built and that they must sell all their excess land before receiving any water on any of their lands. Furthermore, their land values should be assessed before the project is built to ensure that the appraised value excludes project benefits. Finally, BuRec should compile data in more relevant form (as illustrated in Table 6-B) for each and every project, showing: the excess landowners; the amount of

their land that receives BuRec water; the direct annual subsidy they get with this cheap water; the total amount of their excess land in the project area; and the unearned increment they may capitalize on by selling their land.

The Secretary has ample authority to make these procedural revisions which are more in keeping with the original intent of the laws. It was the administrative discretion of past Secretaries that established the current loopholes that let landholders evade the excess acreage laws. Unless the hidden subsidies that sneak through these loopholes are exposed and eliminated, a privileged few will continue to profit at the expense of the general public.

* * * * * * *

CHAPTER 9

SUMMARY OF MAJOR CONCLUSIONS AND RECOMMENDATIONS

The Bureau of Reclamation has outlasted its chief purpose. No longer is there a need for more and bigger dams and irrigation canals to reclaim the arid lands of the West. Yet BuRec doggedly pursues this counterproductive goal that benefits politicians, bureaucrats, and a few profiteering irrigators but not the Nation as a whole.

BuRec manipulates its economic analyses to justify unneeded projects, not to evaluate them -- much like the drunk who uses a lamppost for support instead of illumination. If the Bureau can show that a project has a benefit-cost ratio greater than 1.0, then the project passes the acid test required for Congressional and Office of Management and Budget approval. From that point on, project critics can do little to stop or alter a project's construction.

To get benefit-cost ratios over 1.0, the Bureau persists in claiming enormous benefits from continued irrigation of the West. As we saw in Chapter 2, BuRec's routine irrigation benefit calculations are a sham. The country needs no more farm land. BuRec irrigation facilities not only cost billions of dollars to build and operate, but also drive thousands of other farmers out of their jobs, and increase the amount of money that the U.S. Department of Agriculture must spend to curtail surplus crop production and to support agricultural prices. Thus, taxpayers are hit coming and going.

The Task Force recommended that irrigation be counted as a zero benefit. All backlogged and future BuRec efforts should be evaluated giving no benefit to irrigation. If this recommendation is implemented, then almost all currently planned projects will either fail the economic test or will pass only after considerable changes in project goals.

Although the Bureau of Reclamation should cease its irrigation activities, there is no reason why it should cease to exist.

BuRec must still operate and maintain its existing dams and other facilities. More important, the Bureau should apply its seasoned expertise in a saner way to the West's modern water-resource needs.

The first place to start is with the Bureau's environmental impacts. To date, BuRec dams and levees have ravaged a good deal of the West's natural resources. In typical subservience to the wishes of irrigation, BuRec has harnessed the free-flowing Snake River to the point where millions of fish have been killed and Northwest residents have been forced to abandon the Snake as a source of water and recreation. The Colorado River, as well, has suffered from the severe salinity and sedimentation problems occasioned by BuRec's myopic concern with irrigation.

The American taxpayers have to pay for BuRec's plunder of the West's natural environment. If anything, the Bureau of Reclamation should be paying the taxpayer for flooding out scenic areas, damming up wild-running streams, engaging in ecologically dangerous weather modification efforts, as well

as threatening unique species of Western fish and wildlife. BuRec even tried to dam up America's greatest natural wonder--the Grand Canyon. Such activity is hardly a bargain--at any price.

Again, these atrocities are attributable to the Bureau's faulty economic practices. By failing to give appropriate dollar values to environmental impacts, Bureau officials remain oblivious to such consequences.

The Task Force believes that if BuRec applies consistent and meaningful dollar values to both environmental improvements and damages, then its projects will begin to develop the water resources of the West for the benefit of all citizens--not just for the irrigators. In addition, the Task Force recommends that BuRec funds and water be allocated to water quality improvement as a major goal of project design and operations.

In Chapter 4 the Task Force analyzed more technical economic criteria. We found that BuRec's 200% cost overruns gave its projects a place high on the list of tax-supported government boondoggles. The Bureau's use of an unjustifiably low discount rate also hurt the American taxpayer by making him pay now for BuRec dams that don't even benefit the present generation of taxpayers--except a few heavily subsidized irrigators! Private businessmen and American consumers also suffer from BuRec's overestimated power and municipal and industrial water "benefits" that displace more desirable private alternatives.

Finally, BuRec's current practice of hiding the distribution of project benefits and costs should stop. To alleviate these technical problems, the Task Force recommends that the Office of Management and Budget and the General Accounting Office increase their supervision over BuRec economic evaluations and adopt the many specific suggestions made in Chapters 2, 3 and 4. The President, Congress and the American people should know who really benefits and who really suffers from Bureau of Reclamation projects.

In Chapter 5, the Task Force found that the Central Arizona Project, like so many other BuRec projects, would benefit primarily a few irrigators, politicians and bureaucrats at the expense of the city-dwellers in Arizona and the American taxpayers. CAP would supply central Arizona municipal and industrial water users with water they do not need, at prices they cannot afford. Moreover, CAP will probably require a huge interbasin rescue operation, since there will not even be enough water in the Colorado Basin to fill CAP goals. The Task Force, therefore, strongly recommends that this $1.4 billion pork barrel blunder be scrapped now.

CAP is not the only Bureau project that benefits only a special few. Chapter 6 details how BuRec hides its enormous subsidies--especially those given to irrigators. The direct subsidy with each acre-foot of water combines with BuRec's lax enforcement of excess land laws, to bestow million-dollar windfalls on select profiteers.

However, BuRec has not been so generous in improving the well-being of a more needy group--particularly, the American Indians. The Bureau's deliberate infringement on the Indians' water rights is undoubtedly the most blatant display of BuRec's anti-Indian bias. In particular, the Task Force investigated the Pyramid Lake case, the Kennewick Extension controversy, the Yellowtail Dam deceit, and the Navajo Indian Irrigation Project delay. In all of these cases we found the Federal Government had a conflict of interest that resulted in misrepresenting Indians. While the Task Force detailed specific recommendations for each case, in general we recommend that the Department of Interior recognize the Indians' legal rights before proceeding with any BuRec projects. Furthermore, Reclamation officials and their Congressional allies should promote more Indian water projects by appropriate recognition of distributional impacts in the benefit-cost evaluations.

In Chapter 8, the Task Force scrutinized the policies and recommendations of the Water Resources Council to see if they would remedy BuRec's deficient economic analyses. The Bureau of Reclamation certainly was not the only water-resource development agency to draw outside criticism. The Army Corps of Engineers, which uses similar benefit-cost procedures, also needed revised economic procedures. However, the Corps differs from BuRec in two major ways. First, Corps projects are all over the United States, not just in the West. Second, the Corps

concentrates more on flood control and navigation, while BuRec emphasizes irrigation and electric power. Yet, both of these agencies build multi-purpose projects and use similar economic techniques to evaluate their projects. Moreover, both of these agencies were guilty of using misleading and erroneous indicators of project worth. We concluded that the WRC efforts were so politically biased and narrowly conceived that implementation of the WRC proposal would worsen an already deplorable situation.

Moreover, we believe that the recommendations contained in our report are sufficient to end the Bureau of Reclamation's senseless damming of the West. As a result, we call upon Congress and the President to freeze all Bureau of Reclamation construction until such recommendations or their equivalent are implemented.

Part IV--Tables and Footnotes

FOOTNOTES: CHAPTER 1

1. See Table 1-A.

2. Reclamation Law 32 Stat. 388 (1902), 43 U.S.C. 391.

3. Hearings before a Subcommittee of the Senate Committee on Appropriations, AEC and Public Works Appropriations, FY 1971, Part 2, 91st Congress, 2nd Session, p. 278.

4. Interview by Daniel Barney with Rep. Morris K. Udall (D -Ariz.), July 16, 1971.

5. Senate Appropriations Hearings, op. cit. Also see Bureau of Reclamation, "Bureau of Reclamation Planning Activities," December 1968.

6. Interview by Kip Viscusi with Daniel Dreyfus, Senate Interior and Insular Affairs Committee staff, June 22, 1970.

7. Interview by Kip Viscusi with David Flipse, Chief of Economics Branch, Bureau of Reclamation, June 24, 1970.

FOOTNOTES: CHAPTER 2

1. Reclamation Law, 32 Stat. 388 (1902), 43 U.S.C. 391.

2. Bureau of Reclamation, Reclamation Instruction Series 110, Part 116.4.12.A (1959).

3. Senate Document 97, Policies, Standards and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources, 87th Congress, 2nd Session, p. 9 (1962).

4. Marion Clawson, A New Policy Direction for American Agriculture, Resources for the Future Reprint No. 82, p. 5, (1970).

5. U.S.D.A. Agricultural Stabilization and Conservation Service, Surplus Cropland, pp. 1-2 (1965).

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13. Charles W. Howe and K. William Easter, Interbasin Transfers of Water (Baltimore: Johns Hopkins Press, 1971), pp. 163-164.

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15. Ibid., p. 139. For Howe and Easter's study, the West consisted of 11 Reclamation states; the South included two Reclamation states (Texas, Okla.) and 14 non-Reclamation states; the North included four Reclamation states (N. Dak., S. Dak., Nebr., and Kans.) and 17 non-Reclamation states.

16. Ibid., pp. 144-145.

17. Ibid., pp. 152-153.

18. Ibid., p. 151.

19. Ibid., p. 139.

20. Ibid., p. 144.

21. Bureau of Reclamation, Reclamation and the Crop Surplus Problem, p. 6 (1961).

22. Charles Howe and William Easter, op. cit., p. 160.

23. Interview by Kip Viscusi with Marion Clawson, economist with Resources for the Future, July 24, 1970.

24. Charles Howe and William Easter, op. cit., p. 139.

25. Ibid., pp. 142,154.

26. G.S. Tolley, "Reclamation's Influence on the Rest of Agriculture," Land Economics, Vol. XXV, Number 2, May 1959, pp. 176-180.

27. Charles Howe and William Easter, op. cit., p. 140.

28. Ibid., p. 143.

29. Hearings of the House Subcommittee of the Committee on Appropriations, Public Works for Water and Power Development and Atomic Energy Commission Appropriation Bill, FY 1972, 92nd Congress, 1st Session, Part 3, p. 39.

30. Otto Eckstein, Water-Resource Development (Cambridge: Harvard University Press, 1958), p. 201.

31. House Subcommittee Hearings, op. cit.

32. Phone interview by Richard Berkman with Wayne C. Palmer, Environmental Data Service, July 22, 1971.

33. Phone interview by Richard Berkman with Don Durost, U.S.D.A., July 22, 1971.

34. Hearings of the Senate Committee on Appropriations, Public Works for Water, Pollution Control, and Power Development and Atomic Energy Commission Appropriations, FY 1971, 91st Congress, Second Session, Part 2. p. 278.

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4. Reclamation Instruction Series 110, Part 116.5 19, (1959).

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6. Reclamation Extension Act of 1914 (38 Stat. 686).

7. Fact Finders' Act of 1924 (43 Stat. 672).

8. Omnibus Adjustment Act of 1926 (44 Stat. 636).

9. Reclamation Project Act of 1939 (53 Stat. 1187, 43 U.S.C. 485).

10. Reclamation Instruction Series 110, Part 116.6.2 (1959).

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12. Bureau of Reclamation, Power Systems: Average Rate and Repayment Studies FY 1969, Schedule 1.

13. Hearings before the Senate Committee on Interior and Insular Affairs, Columbia River Basin Account, p. 19 (1965).

14. Ibid., p. 11.

15. Hearings before the House Subcommittee on Appropriations, op. cit., p. 33.

16. Bureau of Reclamation, Summary Report, op. cit., Statistical Appendix, Parts I, II, and III, p. 98, (1969).

17. Senate Hearings, op. cit., p. 11.

18. Charles Howe and K. Williams Easter, Interbasin Transfers of Water, (Baltimore: Johns Hopkins Press, 1971), p. 136.

19. Comptroller General of the United States, Change Proposed in Interest Rate Criteria for Determining Financing Costs of Federal Programs, B-167712, p. 2 (1970).

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24. 32 Stat. 389 (1902); 43 U.S.C. 431.

25. 38 Stat. 689 (1914); 43 U.S.C. 418.

26. 44 Stat. 649 (1926); 43 U.S.C. 423 (e).

27. Memo to Richard Berkman from Mr. Al Burrows, Compliance and Settlement Officer for the Bureau of Reclamation, August 3, 1971.

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POWER AND LAND IN CALIFORNIA

The Ralph Nader Task Force Report on Land Use in the State of California

Volume I

ROBERT C. FELLMETH, PROJECT DIRECTOR AND EDITOR

PRELIMINARY DRAFT

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INTRODUCTION BY RALPH NADER

We gratefully acknowledge the support of this study by the Sierra Club Foundation, the Abelard Foundation and the Center for Study of Responsive Law.

Knowledge about the politics of California land use requires knowledge of the actors. Who owns the land? Who finances the land? Who uses the land for income production? The interests of these parties are inextricably bound to the land use policies of government; every land use decision involves governmental aid or acquiescence of one form or another.*

It is the purpose of Chapter I to provide a setting, and to identify these parties and to define the nature of their interest in the land. The substantive chapters that follow describe the social impacts of land use practices by these actors and their role in public policy determination.

I. WHO OWNS CALIFORNIA

California covers 100,185,000 land acres.[1] In addition, there are some 1,379,840 acres of inland water.[2] Table I - A, below, lists the basic use categories of land by acreage.

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* The government regulates many land use decisions directly, through its ownership of land or through the enforcement of rules (e.g. zoning, codes). Indirectly, government affects major land use decisions by shaping the political and economic incentives of the private parties making them. For example, 100 people each owning 100 acres will put that ten thousand acres to very different use than one owner would, simply because their number and small size gives them different financial abilities and different points of view than a single large owner. A governmental policy encouraging small ownerships indirectly encourages the land use decisions which flow from such a pattern of holdings. The government also shapes incentives by offering rewards or penalties for various types of decisions. For example, a policy of subsidizing irrigation water encourages agriculture; heavy tax assessments of open space near cities encourages development of the space; tax rules, such as rapid depreciation of "capital improvements" to land (charging the depreciation "expense" against current income) encourage speculation and development. Government can also shape incentives through its own massive public works: roads, airports, water projects. Even the ground rules for the formation of local governments to which much land regulation authority is delegated, affects land use patterns.

Table I - A:*
Land Areas, by Major Class of Land
1964 - 65

Class of land	Acres
Total	100,185,000
Forest land	42,416,000
Commercial[a]	17,345,000
Public	9,253,000
Private	8,092,000
Productive-Reserved[b]	1,255,000
Unproductive[c]	23,816,000
Crop land[d]	11,815,000
Urban and suburban land[e]	2,200,000
Other land	43,754,000

[a]Forest land which is producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation.

[b]Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

[c]Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

[d]As reported by 1964 Census of Agriculture. Excludes land cultivated in developing improved pasture.

[e]Residential areas containing at least five homes, with a density of one home or more on each two acres; industrial and commercial development; and the actively occupied portions of military reservations--as determined by land and water use specialists of the Department of Water Resources.

A. GOVERNMENT OWNERSHIP

Of the land area of California, the federal government has proprietary rights over 44.4% or 44,394,000 acres, nearly all desert or mountainous forest land in the northern and eastern parts of the State. Federal holdings have declinedfrom the 49.7% or 49,703,000 acres under federal control in 1961. The State owns 2,310,000 acres and local government another 2,050,000. Table I - B below sets forth the amounts of California acreage controlled by the various government subdivisions and their agencies in 1965 and in 1969:*

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* From 1969 California Statistical Abstract

** Chapter IV discusses the management of these lands.

Table I--B
Government Owned Land in California**

	1969	1965
Federal:	44,394,000	45,076,000
Department of Agriculture:		
U.S. Forest Service	19,971,000	19,971,000
Department of Interior:		
Bureau of Indian Affairs	761,000	547,000
Bureau of Land Management	16,816,000	14,969,000
Bureau of Reclamation	1,089,000	1,105,000
Department of Fisheries and Wildlife	62,000	75,000
National Park Service	4,102,000	4,061,000
Department of Defense:		
Army	1,058,000	1,062,000
Air Force	486,000	5.6,000
Navy	2,772,000	2,646,000
Corps of Engineers	3,319,000	1,954,000
State:	2,319,000	1,954,000
Resources Agency:		
Department of Conservation:		
Division of Forestry	75,000	74,000
Department of Fish and Game	117,000	115,000
Department of Parks and Recreation	811,000	697,000
State Reclamation Board	199,000	13,000
Department of Water Resources	119,000	56,000
Division of State Lands	609,000	634,000
State Comptroller (tax deeded lands)	73,000	72,000
Business and Transportation Agency:		
Department of Public Works	210,000	198,000
Counties	793,000	617,000
Cities (incorporated and excluding city-counties)	809,000	770,000
School Districts	25,000	78,000
Junior College Districts	7,000	7,000
Special Districts	418,000	467,000**
TOTAL	48,765,765	48,969,000[3]

* Federal and State totals included small miscellaneous holdings of departments not included in breakdown.

** Includes:

Irrigation Districts	191,000
Reclamation Districts	24,000
Water Districts:	
State	13,000
County	10,000

(continued)

There are 51.2 million acres left in private ownership, including most of California's coast and nearly all of her rich valleys.

B. PRIVATE OWNERSHIP

There are numerous reasons why government or public knowledge of the identities of certain landholders and the nature of their holdings is essential. The possible abuse of market power is one reason for legitimate State interest in knowing who owns the land of California. Owning the right 5,000 acres might mean extensive market power with respect to land. For example, there is the power to set prices on a type of tree which is necessary for certain uses, e.g., a termite resistant type of Redwood for house construction.

In addition to excessive market power over the products of the land, there is the control over an entire regional economy that ownership of immense acreage can bring. Owning 10,000 acres or more of land that is prime for residential or commercial development can reveal the deep meaning of Winston Churchill's quote introducing this chapter. Once development is established, power over gas stations, retail stores and countless other economic activities connected with the initial development can be exercised through land lease arrangements. The greater the distance to alternate services, the greater the margin for excessive profit. Large land tracts ripe for development (see below) are especially susceptible.*

** (continued from previous page)

Water Districts:	
Municipal	26,000
L.A. Metropolitan	86,000
Water Conservation Districts	14,000

* Owning even a small piece of land may confer much economic and political power. In a state with California's remarkable topographical, soil and plant diversity, this power is likely to be considerable. Ownership of several hundred acres of land that has rare soil and climatic qualities for production of a specialized crop, can give the owner great market power for setting prices on that crop. To the extent that comparable soil, weather,or water are not available in the vicinity of a given piece of land, ownership means the power to set prices within that area for products of the land that require those conditions. California is the foremost producer of such specialized crops. Two basic conditions which may qualify this power are the elasticity of demand for the commodity (e.g., above a given price consumers will substitute peas or broccoli for excessively priced asparagus) and transportation cost of carrying the commodity from more distant points of production.

In addition to the general danger of excessive market power, there are certain governmental functions requiring knowledge of land ownership.

First, the proper regulation of utilities must entail detailed knowledge of land holdings. By granting monopoly power to utilities, the State assumes the responsibility for a careful examination of costs and revenues--since higher rates for consumers can legally be justified on the basis of increased costs. Accordingly, land ownership of utilities should be comprehensively surveyed as part of State regulation. All information concerning the finances of utilities should, of course, be made public in order to enable public monitoring of its government. In addition, the vast powers of eminent domain granted to utilities demand special surveillance. Is condemned land really needed? Is it used for utility purposes? Is just compensation (or excess compensation) paid and due process observed?*

The same kind of information should be an integral part of the regulation of banks, savings and loans and insurance companies as well. Here, not only is information necessary to regulation, it is necessary to enforce specific, existing laws which limit or prohibit non-producing land ownership by these financial institutions.

Knowledge of specific holdings of agricultural land owners is necessary for the proper administration of innumerable laws--from federal grants for non-production to 160-acre water subsidy limits.

Likewise, regulation of logging, grazing, and mining requires, at the very least, the identities of those who are supposedly regulated. The Resources Agency has numerous boards and commissions needing this information.

Finally, those corporations involved in the development of land should make known all property held for many reasons. Among them is a public interest in tangential enrichment which a given public work (e.g. sewage, roads) brings. The public at large has an interest in knowing who owns intervening land through which the utilities and services they pay for are being extended. More specifically, proper administration of current law by the State Department of Real Estate requires this information.

1. Who Does Not Know Who Owns the Land

The Public Utilities Commission does not keep any formal records of landownership by utilities. The annual

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* Chapter VII and Appendices discuss in detail the enormous power of eminent domain, focusing on the condemnation powers and procedures of the Division of Highways.

reports which utilities are required to file merely state dollar value of real estate holdings. There is little information about derived income. The only time that acreage owned by utilities appears to enter the records of the Commission is in occasional hearings, such as in the merger of utilities.

California's major railroads are interstate. The federal Interstate Commerce Commission which regulates them keeps no detailed records of landholdings. The major landowner, Southern Pacific Railroad, has formed a holding company. The "Southern Pacific Land Company" technically owns the railroad-granted land. Macco Corporation, a subsidiary of the Penn Central conglomerate, is another California landowner and major developer. ICC annual reports require little information about parent or subsidiary holdings or dealings. As with State-regulated utilities, these railroads each have territory within which they exercise substantial monopoly power, especially in the transportation of bulk freight (e.g., ores, grain). The lack of informatin about land dealings of subsidiaries makes it easy to divert railroad assets to land ventures and numerous land development costs to the parent company. Rate increase requests are based on higher costs. Once the higher costs are proved, freight shippers are forced to pay; they pass the costs to the consumer. The Interstate Commerce Omission (Grossman, 1970), by another Nader task force, documents the growing diversification of the railroads, their growing monopoly power over specific traffic, the ICC's lack of information about subsidiary dealings, five consecutive rate increase approvals by the ICC over the last three years, evidence of cost hiding and cost padding by railroads and the corruption of public officials.

Although some general data is available concerning bank, savings and loan and insurance connection with land, these, too, have formed holding companies. Despite laws to minimize the direct application of the organized financial power of these institutions into direct land speculation, ownership and development, bank or insurance holding companies have enabled such activity. Subsidiaries and trusts are now entering the field. The California State Department of Insurance, the Department of Savings and Loan and the State Banking Department do not have information adequate to deal with this twentiety-century

loopholing. Ownership of subsidiaries, though subsidiaries might use insurance or bank capital for land purchases in violation of law, is not scrutinized.*

The holdings of those corporations engaged in land development should be publicly disclosed to those charged with subdivision and other regulation. But neither the California Department of Real Estate nor any other agency requires disclosure. Only when a given piece of land is ready for actual subdivision must the existence and owner of that parcel be divulged to the Real Estate Commissioner.** This precludes long-range planning or any useful regulation.

Since no agency directly regulates reports sent to stockholders, there is no requirement that such information be included in annual reports to shareholders. Only rarely is such information included.

The State Department of Agriculture nowhere compiles a statewide list of large agricultural concerns. In order to determine the farms which have registered their land for tax reduction purposes under the Williamson Act (discussed in Chapter II), State Senator Danielson has found it necessary to conduct his own poll in conjunction with this study.

The California Resources Agency cannot tell us who owns any of California (except for government-owned land, above); nor can any of its twenty-plus major commissions or departments. The view is expressed that there is no reason for anyone's wanting to know this information within the Agency.

The State Office of Planning has no idea at all.

The State Board of Equalization should have been the best bet for this information. California tax assessment is now highly computerized and most county records are on tape. Yet the State Board does not compile this information either.

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* Note: records will show the resale at cost of land purchased by an insurance company to the parent holding company. This resale may be strictly a "paper" transaction, allowing the otherwise illegal use of insurance enterprise revenues for land speculation (e.g., the insurance subsidiary may sell its land to the parent below cost); nor is land allegedly "held in trust" by banks scrutinized or questioned.

** Business and Professions Code subsection 11012 requires that land can be subdivided for sale or lease only after the owner or subdivider has given notice. Notice could normally include acreage, plans, etc.

Two instances suggest that the absence of land ownership records is not always a mere oversight. The Department of Water Resources, in administering the State Water Project, was required from the beginning to collect figures for the areas to be served on land ownership in excess of 160 acres. This requirement sought to fulfill Governor Brown's pledge, when he was promoting the Project, that such owners would be charged for any subsidy conferred by the Project. Upon learning this, we immediately went to the DWR office in Sacramento and asked to see those figures. We found, instead, a series of memoranda from Director Gianelli to the contracting water agencies. The memoranda, not made public, reveal: the date for submitting such figures (originally 1968) was postponed, then Gianelli asked the contractors if they really wanted to disclose their holdings and to tell him at their next meeting; a final memo noting that the contractors indicated at the meeting that they did not want to supply the information. Giavelli agreed to drop the requirement. At present, therefore, it appears that the DWR does not have specific land ownership information, and will not collect it in the future--regardless of the Governor's promises.

Even where information must exist, it is sometimes suppressed. The U.S. Department of Agriculture will not release the acreage figures for farms receiving federal subsidies. The California Stabilization and Conservation Service office denied us access to this information, which forms part of the basis for multi-million dollar subsidy grants to California's large farmers.

The defense of this denial rests in the view that this is somehow "trade secret" information. It is disturbing that in the one area where acreage absolutely has to be compiled by owner, it is denied to the public--particularly when the information is part of the formula for distributing in subsidies the public's money.

We are left with county recorders and assessors, having found no statewide compilation anywhere. The offices of county assessor should be a likely source of information concerning landholding. The assessor must collect information relating to all taxable property in the county. Upon the request of the assessor every person must file annually a written property statement under oath with the assessor.*

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* See Revenue and Taxation Code subsection 441. The property statement must show all taxable property owned, claimed, possessed, controlled, or managed by the person making the statement. The statement must also show the county where the property is taxable, and if taxable in the county where

(continued)

Whatever the legal status of the right to inspection under current law,* canvassing the assessors' offices for this information poses extreme difficulties. First, there are fifty-eight counties. Each county assessor maintains a file on each parcel of land in the county. The order of filing is by tract, block and lot in urban areas, and by description in non-urban areas. There are also alphabetical card files of property owners. But these indicate only the number and locations of parcels in each owner's name for assessment purposes. There are often hundreds of thousands of parcels in each owner's name for assessment purposes. There is no cross-indexing by type, size, value or other characteristics: hence, there is no practical way of compiling the total acreage of land by owner or use in the county. Information kept by county recorders is in even less useful format for analysis by owner.

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* (continued from previous page)
the statement is made, in a city or revenue district in which it is situated. The statement must give a legal description of any real estate. The purpose of property statements is to assist the assessor in performing his duty. Revenue and Taxation Code subsection 451 provides that all information furnished in property statements is to be held secret by the assessor and is not open to inspection except by law enforcement agencies, the county grand jury, the board of supervisors when conducting an investigation of the assessor's office, the State Board of Equalization, and other duly authorized legislative or administrative bodies of the State.

* Until 1961, the assessor's position was that the only records open to inspection by taxpayers were the map books and the assessment role. In 1961, subsection 408 of the Revenue and Taxation Code was broadened to include the right of an assessee of property to inspect any information and records, whether or not required to be kept, relating to the appraisal and assessment of his property. Information and records which also relate to the property or business affairs of a person other than the assessee is not available to the assessee. Whether this section of the Revenue and Taxation Code establishes a more narrow right of public inspection than the general inspection statutes in the Code of Civil Procedure (subsection 1892) has yet to be adjucated in California. According to the Code (California Public Records Act) every citizen has the right to inspect and take a copy of any "public writing" of the State, with certain exceptions.

Potential computer technology for recording and already existing computer use by assessors would make the gathering of this information by county and by State* relatively easy and cheap. It merely requires standard coding and a very simple program. The following two letters from assessors in response to our request for the names and acreage of the top twenty landowners in each county illustrates the current problem.

2. Who Are the Private Owners of California?

The last serious attempt to determine California's ownership was in 1940. At that time, a Congressional Committee sought to compile a list. It came up with a list of twenty-seven properties.** The list is incomplete and omits hundreds of owners.

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* A small number of assessors do keep this information by owner and supply it upon request; see below.

** 1939 Hearings: Violations of Free Speech and Rights of Labor

Landholdings in California
Exhibit 9589
Landholdings in California
I. Land and Farming Companies

California Delta Farms	6,440
California Lands, Inc.	395,800
Del Monte Properties	13,504
Diamond Ranch, Inc.	51,667
El Solyo Ranch	4,500
Empire Farms, Inc.	8,300
Holland Land Company	4,202
Kern County Land Company	413,561
Marysville River Farms Company	1,750
McDonald Island Farms	3,424
Mid State Horticultural Company	3,386
Miller and Lux, Inc.	93,058
Natomas Company	61,271
Productive Properties, Ltd.	5,295
Rancho Mira Loma	1,857
River Farms Company	31,000
San Diego County Water Company	46,000
Shoreland Corporation	13,000
Southern Pacific Land Company	4,005,840
Spring Valley Company, Ltd	8,870
Sunny Hill Ranch, Inc.	2,650
Sutter Basin Corporation	41,922
Suttern Buttes Land Company	8,512
Temescal Water Company	8,600
Valley Agricultural Company	4,404
Yuba Consolidated Goldfields	18,211
Weyl-Zuckerman Company	2,704

Source: Walker's manual of Pacific Coast Securities, 1939, except where otherwise indicated.

Our results are presented in Appendix I - B. Our sources are many and varied, including surveys of popular sourtrade press,* financial directories,** county atlases, maps and survey reports issued over the past decade,*** personal compilations of agricultural, union officials and others.

We first attempted to gather a listing of statewide landholders deductively. We identified the large owners and then wrote them all in an attempt to get their acreage figures. Our attempts were rebuffed. Not only did corporations almost universally refuse to answer at all, but even utilities termed this information (mere acreage figures) "confidential." Evidently, the monopoly and condemnation powers granted to these utilities by the public is not considered sufficient to justify disclosure to the public of this fundamental use of their funds.

Our results changed somewhat when we changed our letter. The new version did not ask about ownership, it asserted that we had discovered that x company had y acres and left two blanks at the bottom. One was to be checked if the number filled in was correct, another if incorrect, with the correct number supplied. If we thought we knew the acreage, we filled in our estimate. If we had no idea, we used the arbitrary figure of 28,000 acres. Interestingly, the opportunity to correct a seeming error brought in well over 100 replies (25 to 30% of those queried by this method). Nevertheless, some would check "incorrect" and mark "x" or "confidential" where the correct amount was to be supplied in our form. Most still would not answer despite the easy form and the self-addressed stamped envelope. Even utilities (except for PG & E) maintained an arrogance inappropriate for an entity with their publicly-granted privilege and trusteeship. Following is one reply

We were also interested in a complete survey of enough individual counties to verify the statewide holders contacted individually and to examine concentration within some typical counties. To aid in these efforts, we wrote to each of the fifty-eight county assessors in California. As mentioned above, we requested the names of the top twenty landholders by acreage and the ten top property taxpayers. We enclosed a form for the information

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* Includes survey of L.A. Times and Sacramento Bee over past several years and of trade press both through Funk and Scott's Directory and separate reviews of Western Fruit Grower, Produce Marketing, other leading agricultural press.

** Including Walker's Manual of Far Western Corporations (1968), Standard and Poor's, Moody's, et al.

*** Including Metsker's Atlases, Ballis's Map, Price's Map, Henry's Atlases, Real Estate Directory Inc. Atlases, et al.

and a self-addressed, stamped envelope. We received eighteen replies. Only seven complied with our request. Those who answered pleaded insufficient resources, said that they did not keep acreage figures (even though often on their computer tapes) or merely sent back a blank form with no comment at all. Even those who complied generally wanted to know who we were and the use to which the information would be put. Nevertheless, the returns which we did receive, in addition to our own independent county studies and surveys, gave us a chance to look at land ownership concentration for a number of different counties. It also enabled us to do a trend analysis in several counties for which we had older (1959) map data. Finally, it gave us a second dimension, concentration by land value as well as by land acreage. Here we can look not only at who owns the most land, but who owns the most valuable land (under current assessment criteria).

Table I - C below lists the twenty-five largest landowners in the State according to our survey results. Given California's size, wealth and diversity, statewide concentration of ownership by acreage is remarkably high. Table I-D analyzes concentration in greater depth and reveals that 257 entities own at least 25% of the privately owned land of the State.

The fact of concentration is as important as it mobilizes potential political as well as economic power. Our figures, as high as they are, understate the level of concentration. First, although we believe most of our acreage figures are accurate,* we could obtain no reliable acreage figures for many we know to be large landowners. (See Appendix I - B).

The major landowners where acreage figures were unobtainable are listed in Appendix I - B along with a listing of known acreage holdings.

Second, our figures are understated because economic and political power concentration is more relevant by land category.** One hundred thousand acres is not a dominant share of the State's land, but if there are only 250,000 acres of white pine and the 110,000 acres are

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* About 5-10% of our figures are from data more than three years old and therefore not perfectly reliable or current.

** See Chapters II-VII for examples and case studies of the use of organized political power by landowners to obtain public works, tax and other favors.

white pine land, the share is more significant. Our division of owners into three categories in Appendix I - B by type of land is extremely rough, but affords some opportunity to see how concentration increases when the land is divided into agricultural, timberland and development groupings. Comparing Table I - A with timberland acres, nineteen firms own about 35% of it. If we add in the timberholdings of Southern Pacific (which is in the agricultural category in our tables) the total comes to twenty firms owning about 43% of this land.*

The 11,815,000 acres of cropland in California agriculture is not comparable to the 37 million acres of total "farmland" which would include private range and waste land, in the general agriculture category of our tables.** If we assume that approximately one half is cropland,*** then twenty-nine own 21% of this land, seventy-five own 27% and 220 own 35%.

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* See commentary by owner in Appendix I - B for breakdown of land type and location where land falls into more than one general category.

** CALIFORNIA FARMLAND USE

	Million Acres	Percent of Farmland
Cropland Harvested	7.8	21.1
Cropland Pastured	2.1	5.7
Cropland not Harvested or Pastured[a]	1.9	5.1
Total Cropland	11.8	31.9
Woodland Pastured	2.8	7.6
Woodland not Pastured	.6	1.6
Pasture not Woodland or Cropland	20.5	55.4
Land in Farmstead, Roads, etc.	1.3	3.5
Total Farmland	37.0	100.0

[a]This includes 1 million acres in summer fallow; the rest includes idle land, crop failure, etc. Source: Facts about California Agriculture, 1968.

*** Written breakdowns by those large owners answering our questionnaires indicate that 50% of farmland holdings are in the cropland category. The large cropland holdings of the "new corporations " discussed below makes this figure reasonable (i.e., as revealed in recent surveys).

Third, our figures as clarified are still understated because they are statewide. Owning that 110,000 acres of white pine means more if the other 140,000 acres are in another part of the State--500 miles away. Taking somewhat smaller areas, such as counties, gives us a clearer picture of localized land ownership concentration. Table I - E presents two typical rural counties and one urban county. Appendix I - C presents all eight rural and three urban counties for which we have data. Generally, the top twenty landowners of rural counties (amounting to from one-fiftieth of one percent to just under one percent of the population) own from 25-50% of the private land. In urban counties, the top twenty landowners (amounting to from one two-hundredth of one percent on down) own 15-30% of the private land. Breaking each of these counties down by land type (as we briefly did on a statewide basis) would raise these levels still further.

Moreover, counties chosen for this analysis were not the most concentrated. The State's largest landowners concentrate their ownership in Kern (Kern County Land, et al.), San Bernadino (Southern Pacific Land Co.) and other counties.* Yet, concentration is very, very high in the counties for which we had data. Images of medieval baronies are compelled. When examining county maps plot by plot, land domination by small numbers of firms and individuals is most striking.

The trend in land ownership suggests further concentration. Although homesteading and sales reduced California's land empires of the 18th and 19th centuries, a U-curve has formed as concentration has lately begun to enter another upswing. For the past three to four decades diversified giants have been accumulating new territories. Increasingly, they own California.

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* See, for example, the ownership of land in these counties as presented in Chapter III tables. See also the Williamson Act Survey data in Chapter II. Note that the giant landowners of Appendix I - B are situated generally in counties not covered in our survey.

A very recent survey affirms these levels of concentration, but suggests that they might be understated. The Agricultural Extension Service of the University of California, in cooperation with the Economic Research Service of the U.S. Department of Agriculture, conducted a survey in 1969 of the 2,566 corporations engaged in agricultural production in California. The results of their survey are presented in a little-known booklet entitled "A Statistical Profile of California Corporate Farms," published in December of 1970.

The survey covers 6.1 million acres in corporate farms. Very little of this is range or waste land, the majority of it is prime crop land and probably represents close to one-half of the prime crop land of the State. Table 18 on page 27 of the study reveals that as of 1969, forty-five corporate farms, representing less than one-tenth of one percent of the commercial farms in the State,* control 3,714,000 acres, or approximately 61% of the land covered by the survey. This is high concentration, even before this land is categorized by specific crops. The survey also found, as we shall discuss in Chapter II, that one-half of the acreage is controlled by large conglomerate corporations with other business enterprise, and often with additional farming operations in numerous states. At the same time, most of the corporations are closely held, controlled by another corporation or by fewer than four stockholders.**

Evidently, we were not alone in having difficulty obtaining data or in concluding that our findings understate the degree of concentration. Just less than one-half of the respondents in this 1969 survey returned their questionnaires. The authors conducted a follow-up study of 164 nonrespondents. Interestingly enough , they remark on page one that "there was a significant difference between non-respondents and those who had answered the original request--nonrespondents were sugnificantly larger than the original respondents."

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* According to the 1964 U.S. Census of Agriculture, there are 57,298 commercial farms in California

** One-half of the acreage is farmed by corporations that are not controlled by individuals or families, but by unrelated individuals or other corporations. Further, 46% of the acreage is controlled by corporations with substantial other business enterprise outside of farming. Those with other business interests own 85% of their land, those engaged in farming as their sole business own only about one-half of their land and "rent"the remainder; 46.4% of the farming corporations (representing an even larger share of acreage) operate farms in two states or more, 25% of them in four states or more. At the same time, 66% of the corporate farms have four or fewer stockholders and 98% have less than ninety stockholders.

A 1963 study* of timberland holdings discovered that the top twenty-three owners representing one thirteenth of one percent of the total owners, owned just over forty-three percent of all private commercial forest land in the State. By 1970, we can find twenty firms owning this much land if we allocate the timberland holdings of Southern Pacific properly. (See Appendix I - B for data)

A comparison of ownership in Modoc County shows the trend in a county with much timberland and increasing development. Table I - F below shows the marked increase in concentration over the past twelve years.

The identities of the new statewide developers and landowners, e.g. Kaiser Industries, Standard Oil, presage accelerating ownership concentration. Tax breaks for capital gains from land value appreciation and the ability to profit from influenced government expenditures (public works) make continued involvement likely. The immense resources of these firms and the entry into the field of the nation's financial giants indicates that the tightening oligopolistic structure of American industry will be reflected in land ownership.**

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* OWNERSHIP OF COMMERCIAL FOREST LAND, CALIFORNIA, 1960

	Estimated number of owners	Million Million acres owned
Total Public	--	9.26
U.S. Forest Service	--	8.57
Other federal	--	0.50
State and local	--	0.19
Total Private	--	8.05
More than 50,000 acres	23	3.44
5,000 to 50,000 acres	105	1.11
Under 5,000 acres	30,000	3.51

Source: Economic Development Prospects for the Commercial Forest Resources and Forest Products Industries of California (Berkeley, 1963)

** One other dimension to this tightening structure, the many and increasing interlocking directorate arrangements binding these giants to one another and to allied financial institutions is discussed below. Also discussed below are the institutional ties created between these firms through their trade associations.

Appendix I - D presents data and analysis of land concentration by land value instead of acreage. It is evident that even though concentration by value is lower than by acreage, partly due to assessment criteria (which includes structures), it is still high--especially for underdeveloped or just developin areas.*

The U-curve trend in the concentration of agricultural holdings is even more apparent than with respect to timberland. The average acreage of agricultural landowners has been increasin steadily since 1930.

TABLE I - G
AVERAGE SIZE OF CALIFORNIA FARMS

Year	Average Acreage
1920	250
1930	224
1940	230
1950	267
1954	307
1959	372
1964	458
1969	627

The fact that a few corporate owners control a great deal of California's land has important consequences for the use made of that land. For one thing, the large corporate owner has a much more single-minded desire for profit than, say, the family farmer who may develop sentimental attachments to his land. Often, management jobs depend solely on profit returns which satisfy controlling directors or stockholders. Likewise, the well-being and friendship of his neighbors may not concern the corporation. The profit motive dictates the "highest" economic use of the land, even if incompatible with other values. This approach encourages speculation and short-term time horizons for the owners. Land can be used until no longer profitable, and then discarded for other land. For example, one of us asked a corporate farm manager if his excessive use of ground water would deplete the source and leave the earth a wasteland. "Sure," he told us, smiling, "but we won't be here then."

The permanence of the land and of the changes to it from various uses often makes the market an intrinsically inadequate regulator--failing to account for costs which will fall on those other than immediate investors and converters.*

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* Before development, the large landowners by value are comparable to the large landowners by acreage, with a slightly lesser concentration ratio. During development, concentration lessens as profits are taken from speculative holding at this stage, and new high value landowners begin to appear. These are usually utilities, railroads, large developers, oil companies and occasionally very large manufacturers. See Table I - F.

Almost by definition, highly concentrated land ownership and control means more political and economic power and greater ability to oppose contrary interests than widely-diffused ownership or control (See Chapters II-VII for case studies). A larger portion of the earnings from large land holdings go toward political expenses (See Chapter VII). Also, the large owner's land-use decisions have a greater public impact, and thus give him a stronger bargaining hand with officials. Most important, a few owners can far more easily unite in common cause (for example, advocating the State Water Project) than can a diverse and heterogeneous multitude. The few control their political and economic destinies; the many are more subject, both in economics and politics, to Adam Smith's invisible hand. In California, the few increasingly own its private land.

C. CHALLENGING OWNERSHIP

We have chosen for presentation in Appendix I - E a brief description of the land-holding history of the present Southern Pacific Company (SP). Still the largest landowner in California, the Southern Pacific acquired its initial holdings via land grant, as with many of California's larger estates. The Southern Pacific land grant was not Spanish in origin, but the nature of the grant presents questions typical of those that can be posed about many of California's larger landowners: How did they acquire the land? On what basis is it held? Who should have it if not the present owners? Have they managed it responsibly or have they sacrificed future use for present profit? How should damages be assessed? These are all preliminary questions to a study of land use. There is no reason to assume that large landowners, who may control much government policy, have a right even to own what is allegedly their land. The analysis of Southern Pacific's holdings raise severe doubts concerning the continued legality of current land ownership and use.

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* As we shall see, there are other deficiencies in the current market system which fail to allocate resources efficiently or sensibly. That is, rules of liability which fail to assess the external costs of a land use (e.g., pollution) fail to minimize these costs. In individual cases, lack of information about the consequences of a land use (or lack of information about the uncoordinated land-use plans of others) impede the proper functioning of the market.

The federal Homestead Act of 1862, designed to prevent land monopolies and to open the West to the small independent farmer and rancher, was undermined not only by SP and federal grants, but by the Mexican land grant system. The scandals evolving from the disposition of California's land during the entire 1800's makes our examination of SP holdings relevant to many of California's large older estates.

The Mexican government broke up the early mission estates in 1833, granting over 26 million acres to some 800 families. The criteria for receipt of this land usually involved political, economic or military "service" to the regime. From 1833 to 1870, the courts were clogged with property disputes involving these grants. In the 1870's a federal commission examined the grants and "approved" 588 of them covering approximately 8.8 million acres. The federal examination of these grants was sketchy at best, but the grants form the basis for many of the top twenty-five landholdings in Table I - C. Tejon Ranch, Irvine Company and Miller and Lux, among others, derived their estates from this system. Not only the grants themselves, but as with Southern Pacific, the seemingly unlawful sale, leasing and use of the grants pose serious questions worthy of renewed and exhaustive investigation.

Of course, there are many examples of ruthlessness which are not clearly illegal. Henry Miller, for example, creator of the once immense Miller and Lux holdings, became famous for his tactic of controlling water supplies and forcing dependent farmers to sell to him at a pittance of the land's irrigable market value (after they had cleared and cultivated the land) or face a devasting cut-off of water. He eventually acquired 150 miles of shoreline along the Kern and San Joaquin Rivers and approximately one million acres.[5] The complexities of water and property law were not taught in the elementary school houses where settler-victims were educated. Thus, SP could advertise and promise to sell its land (according to the requirements of its grant) at $2.50 per acre and then lower the boom by demanding $25 to $40 per acre (fine print charges, interest, etc.)--after the land had been cleared, buildings erected, irrigation ditches dug, fences up and the first crop about to come in to pay for the land. If the higher figure were not forthcoming, public auction would provide it.[6]

But as we have pointed out, as often as not the law was violated--almost always in a most explicit manner. Despite court interpretations of law in favor of the large landholders (often due not only to the famous corruption of the California judiciary throughout the late 19th and early 20th centuries, but to the inadequacy of legal resources and talent mustering the challenge), there is a substantive basis for the return of most of what remains. Henry Miller, for example, may have had much of Southern Pacific's sophistication, but he committed

illegalities most difficult to explain away. For example, in 1850 land speculators pushed through the U.S. Congress a bill which granted all federally-owned "swamp and overflow lands" within each state to that state. California then sold more than two million acres of what was designated swamp land for $1.15 to $1.25 an acre. California has never had this much swamp land. Two state surveyors, authorized to designate tracts as "swampland," left office with 300,000 acres apiece. Horace Greely wrote that much of the land with which he was personally acquainted was "so dry there was not enough muck to supply a single small frog." An investigating committee later adjudged the disposition of this land as "wholesale fraud." But the damage had been done. Henry Miller bought much land in this category. In fact, he hitched a small boat to a team of horses and had himself dragged through one tract so he could testify that it was swampland.[7]

William Carr, James Haggin and Lloyd Tevis created much of the current Kern County Land Company through similar manipulation of the federal Desert Land Act in the mid-1870's. William Carr acquired thousands of acres at a mere $1.25 per acre under the Act through "dummy" individuals. The law limited each entry to 640 acres. Seventy thousand acres were obtained. Despite later investigation disclosing fraud, Carr and his associates were allowed to keep the land after explaining that they deceived officials because they were the only ones who had the resources to irrigate and make the land useful. After so improving it, they promised to sell it to the settlers who were supposed to receive it under the Act. They did not sell the land, however. Now government is providing the water works which will enable the irrigation of this land and increase its value immensely (See Chapter III).

Where common law analogy and the terms of major laws and grants allow, land either obtained fraudulently or used in violation of express conditions should escheat to the state. That is, the land should be forfeited or revert to federal or state government. Such should be the case with most of the land of the Southern Pacific Company and inquiry would uncover other cases where there is continuing violation (or lack of a statute of limitations problem) and where the owner remains accountable.

Indeed, there are numerous questions of fraud, mismanagement and public corruption which cannot be attacked by forfeiture of ownership. Henry Miller's famous "loans" to county assessors in return for low assessments do not violate a condition of his interest in the land. The body of this work will present hundreds of such current examples. These must often be met through acknowledgement of ownership, and then enforcement of the responsibilities that ownership entails. Thus, while we emphasize prospective, general social remedies (e.g., changes in rules of liability, taxes)--private covenants, equitable servitudes, enabling acts for disposition of public land and grant terms should be challenged as they apply to the past and present actions of individual owners in particular cases.

APPENDIX I - B:

MAJOR PRIVATE LANDOWNERS AND HOLDINGS IN CALIFORNIA--DATA LIST*

PRIMARILY AGRICULTURE

200,000 acres +

Name	Amount	Comments
Tenneco Inc.	362,843	+53,584 leased in California and over one million acres owned in other states, mostly through Kern County Land Co. subsidiary
Tejon Ranch Co.	348,000	fifty percent owned by LA Times Mirror Corp.
So. Pacific Co.	2,411,000	394,000--app. rt. of way and trans. acreage 163,000--agricultural, 674,000 grazing, 468,000 timber--rest is idle and held for investment. 179,023--Siskiyou Co. survey 17,500--Butte Co. 60,294.84--Nevada Co. 28,852--Sierra Co. 197,160--Trinity Co. 156,400--Shasta Co. 111,256--Fresno Co. (D. Survey) 2,017,000 non trans-holdings verified by owner
Standard Oil of California, Inc.	306,000	Mostly agricultural--also for oilfield operations, refining, marketing, pipilines, grazing and development--verified by owner.

80,000 - 200,000 acres

Irvine Co.	101,600	Row and field crops--25,837; Pasture and grazing--49,016; Develop.--15,747; 10,000 in Imperial County--verified by owner.

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* As of January 1971. See text for general sources. "Verified by owner" means owner responded to our survey, supplying the acreage figure. "Metzker's" refers to "Metzker's Map." "Danielson Survey" refers to the assessor survey of the State Senator in cooperation with our Task Force (see Chapter II). "Studies" or "surveys" of individuals counties refers to our separate survey of assessors (note forms in Appendix I - C and in text).

J.G. Boswell	108,000	Includes Boston Ranch Inc.--verified by owner
Miller & Lux, Inc.	93,058	Includes Buena Vista Farms (26.766 acres), Bowles Farming Co., Santiago Ranch
Newhall Land and Farming	152,000	50,000 in agriculture, numerous ranches
Kaiser-Aetna	118,000	Rancho California (98,000 acres) and Rancho Ventura (10,000 acres)
	40,000 - 80,000 acres	
Giffen Inc.	60,000	52,410 in Westlands Water District
San Diego Water Co.	46,000	Pre-1960 records
Sutter Basin Corp.	41,922	Pre-1960 records
Anderson, Clayton & Co. (ACCO)	52,000	(Vista del Llano), 30,738 in westlands water district
Rancho Mission Viejo Co.	50,000	Orange Co.
Wm. G. Henshaw	60,000	San Diego Co.
Cammatti Ranch	40,000	Shandon, San Luis Obispo Co.--both cultivated and range land
R.E. Jack Co.	60,000	Cholame, San Luis Obispo Co.--both cultivated and range land
Twisselman Estate	45,000	Cholane, San Luis Obispo Co.--ranch, cultivated and orchard land
Dibles Estate Co.	46,000	Santa Barbara Co.
Jesus Marina Rancho Co.	47,000	Santa Barbara Co.
H & W Pierce	47,000	Santa Barbara Co.
Edwin L. Stanton	50,000	Santa Cruz Island--Santa Santa Barbara--range land
Vailt Vickers	52,000	Santa Rosa Island, Santa Barbara Co., range land

Hearst Ranch	50,000	San Simeon, San Luis Obispo Co.--range land
H. Walker et. al.	51,200	
Getty Oil	62,000	Danielson Survey, Kern Co., 12,000 development, 48,000 agricultural
Bangor-Punta Corp.	54,000	54,000 acres in Southlake Farms--conglomerate
	20,000-40,000 acres	
Purex Corp.	30,000	Brock Ranches, Fresh Pick major subsidiaries. Others include: Valley Packing Co., Wilco Produce Co., Gonzales Potato Co., George Russ Co. (Col.) Assoc. Produce Distributors, Cochran Co., Ferry Morse Seed Co., John Jacobs Farms (Ar.), Oceanview Farms. most land in vegetable production. Purex is being told to divest by FTC.
River Farms Co.	31,000	
Di Giorgio Corp.	27,000	
Del Monte Corp.	21,220	Formerly Del Monte
Colt Ranch Inc.	24,500	6,500--agriculture; 1,800 recreation; 6,252 in Westlands Water District--verified by owner
Will Gill & Sons	29,926	
Tidewater Assoc. Oil Co.	25,551	
Von Glahn Lands	21,553	
Blackwell Land Co.	25,001	(owned by Lazard Frere)
Samuel S. Vener	28,001	
Sisquoi Ranch	38,001	(owned by James Flood) Santa Barbara Co.

Moulton Co.	21,500	El Toro Orange Co.--range, orchard, cultivated land
C.W. Clark Co.	20,000	Shandon, San Luis Obispo Co.--range land
Grayson Owens Co.	35,000	Carrisa, San Luis Obispo Co.--range and cultivated land
Santa Margarita Ranch	26,000	Santa Margarita, San Luis Obispo Co.--cultivated and range land
Claude Arnold	20,000	Carrisa, San Luis Obispo Co.--cultivated and range land
La Panza	30,000	Carrisa, San Luis Obispo Co.--cultivated and range land
Sinton Bros.	25,000	Shandon, San Luis Obispo Co.--range land
Pike	30,000	Stewarts Pt., Sonoma Co.--range land
I.G. Zumwalt	30,000	Colusa, California--cultivated, orchard and range land
Wendell Payne	20,000	Woodland, Colusa Co.--range land
J.E. Mitchell	28,000	Colusa Co.--range land
Wm. Sites	20,000	Colusa Co.--range land
French Co.	27,000	Willows, Glenn Co.--range land
Grenoc Ranch	22,000	Middletown, Lake Co.--range and cultivated land
Hewlett Packard Co.	22,828	San Felipe Ranch, Danielson Survey, Santa Clara Co.
Adobe Ranch	22,000	Madera Co.--range land
Flournoy Bros.	25,820	13,540 a. Modoc Co.--cultivated and range land--12,280 a. Fassen Co.--Metzker's
Nels Monroe & Son	25,000	Modoc Co.--cultivated and range land

Broome Ranch	24,000	Camarillo, Ventura Co. range land
L. Doheny	22,000	Ventura, Santa Barbara Cos.
Lewis family	20,000	Carrisa, San Luis Obispo Co.
Belridge Oil Co.	24,000	Through Belridge Land Co.
Roger Jessup Farms	21,700	18,500 Modoc Co.--Metsker's '58; 3,200 Trinity Co.--Metsker's '59
Anderson, Clayton	30,738	In Westlands Water District
L. McConnel	20,480	Shasta Co.-- Metsker's '59
Wm. Smith	34,960	25,760--Humboldt Co.; 9,200--Lassen Co.
Salyer Land Co.	34,000	Danielson Survey, Kings Co.
Westlake Farms	24,250	Danielson Survey, Kings Co.
California Land & Cattle	31,370	Danielson Survey, Monterey Co.
Galvin Trust	30,057	Danielson Survey, Monterey Co.
	10,000-20,000 acres	
Dow Chemical	16,940	15,000 for Bud Antle Lettuce land + 1158 more for agriculture; 782 for industrial--some is in Arizona
Giumarra Vineyards Corp.	12,459	Including some leases
Spreckels Sugar Co.	14,800	
Union Sugar Co.	11,200	Verified by owner
San Emidio Rancho	15,660	
J.F. Gibson	12,517	
Kings Co. Devel.Co.	11,371	

Sayler, William Jr.	10,240	
General Petroleum Co.	12,296	
South Dawn--McCarthy Farms	14,000	
Bruce Church Inc.	14,000	
M.J. Yoder	15,000	Hemet, Riverside Co.--cultivated land
Searl Bros.	15,000	Hemet, Riverside Co.--cultivated land
Martin Bloom & Co.	18,000	San Diego Co.
Jean Cazaurang	16,000	San Diego Co.
P.J. Connolly	12,000	Tracy, San Joaquin Co.--range land
White Ranch Co.	10,000	Shandon, San Luis Obispo Co.--cultivated and range land
Heilmann Bros.	15,000	Ataseadero, San Luis Obispo Co.--cultivated and range land
Miller & Hanson	12,000	Shandon, San Luis Obispo Co.--range land
Asa Porter	15,000	Arroyo Islands, San Luis Obispo Co.--cultivated and range land
Elmer King	10,000	Carrisa, San Luis Obispo Co.--cultivated land
Rice Ranch	10,000	Nipomo, San Luis Obispo Co.
Guy Arnold	10,000	Pozo, San Luis Obispo Co.
Goodwin Ranch	10,000	Carrisa, San Luis Obispo Co.
Howard Sumner	10,000	Carrisa, San Luis Obispo Co.
Howard Iverson	15,000	Cholane, San Luis Obispo Co.--cultivated and range land
Iver Hansen	10,000	Paso Robles, San Luis Obispo Co.--cultivated and orchard land

J.R. Ranches	15,000	Paso Robles, San Luis Obispo Co.--cultivated and range land
Fields Ranch	10,000	San Luis Obispo--range land
Marre Land & Cattle Co.	15,000	San Luis Obispo--range land
Tar Springs Ranch	10,000	Arroyo Grande--range land
Buck Horn Ranch	10,000	Carrisa, San Luis Obispo Co.--cultivated and range land
R.T. Buell	16,000	Santa Barbara Co.
Orena family	18,000	Santa Barbara Co.
J.E. Cebrian	19,000	Santa Barbara Co.
Patterson Bros.	11,000	Livermore, Alameda Co.--range land
George Walker	15,000	Livermore, Alameda Co.--range land
E.L. Adams	10,000	Nelson, Butte Co.--cultivated land
Chester Tiscornia	17,000	San Andreas, Calveras Co.--range land
J.L. Browning	10,000	Colusa--cultivated land
Howell Davis	10,000	Colusa--cultivated land
Bacchi Ranch	15,000	Lotus, El Dorado Co.--range land
Todd Wheeler	14,000	Orland, Glenn Co.--range land
Holmes Livestock Co.	17,000	Willows, Glenn Co.--range land
Ernest Michael	14,000	Artois, Glenn Co.--range land
Sherman Thomas	11,000	Madera Co.--cultivated land
H.C. Cattle Co.	19,000	Modoc Co.--cultivated and range land; 3,000-Lassen Co.

W.S. Orvies & Son	10,000	Northern Stanislaus Co.--cultivated land
Dickerson Ranch	12,000	Patterson, Stanislaus Co.--range land
George Covert	12,000	Coast range, Stanislaus Co.--range land
George Covell	10,000	Patterson, Stanislaus Co.--cultivated land
Sutter Basin Corp.	12,000	Robbins, Sutter Co.--cultivated land
River Farms	13,500	Knights Landing, Yolo Co.--cultivated land
American Crystal Sugar Co.	12,000	
Meiss Ranch, Inc.	13,323	Siskiyou Co. Assessor
Porterfield Bros, Inc.	12,852	Siskiyou Co. Assessor
Roy Naftzger	13,794	Danielson Survey, Santa Clara Co.
Mills Ranch	10,532	Siskiyou Co. assessor
Redfern Ranches	13,017	Danielson Co., Santa Clara Co.
John Gill et. al.	10,383	(Sacto Co. Assessor)
Bar Seventy one	10,385	Danielson Survey, Santa Clara Co.
Nora Henderlong-Wickersham Ranch	11,883	Danielson Survey, Sonoma Co.
Soper Wheeler Co.	10,120	Butte Co. Survey
5-D Ranch (Douglass)	11,359	Danielson Survey, Stanislaus Co.
Taylor, Agustus Jr.	10,100.11	Nevada Survey, Stanislaus Co.
Hansen Cattle Co.	12,020	Lassen Co.--Metzker's '58
W.H. Raupp et. al.	13,040	" "
G.R. Heath	11,520	" "

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T.E. Connoly	13,400	Lassen Co.--Metzker's '58
W.H. Hunt, Est. Co.	14,440	" "
J.W. Mapes	13,400	" "
S.S. Jaksick	17,680	" "
Dean Witter Jr. et. al.	18,040	Trinity Co.--Metsker's '55
R.G. & E. Jameson	10,920	" "
Wm. C. McCulloch	10,600	" "
P. & J. McAuliffe	11,520	Shasta Co.-- Metzker's '59
Tooby & Prior	13,000	Humboldt Co.-- "
Calif. Barrel Co.	11,680	" "
Hill-Davis Co.	18,325	" "
Jos. & S.A. Russ	10,000	" "
Merillon & D"Oultremont	13,240	" "
Gamble	13,970	Danielson Survey, Napa Co.
R. Hunter	19,640	Humboldt Co.-Metsker's
Stimson & Miller	14,400	Del Norte Co.-- Metsker's '59
Westgate-California Corp.	17,000	14,000 acres are presently agricultural in San Joaquin Valley--rest is development
West Haven Farming Co.	10,273	Bureau of Reclamation--Excess Land Ownership Study 12/68
N-3 Cattle Co.	16,112	Alameda County--Danielson
W.J. Deal Co. Ltd.	10,555	Danielson Survey, Fresno Co.
Noble, Wm. H.	18,197	" "
Nickel, George	15,770	Danielson Survey, Kings Co.
Mouren Farming Co.	12,120	" "
Elsie Buchanan	17,354	" Madera Co.

George A. Pope, Jr.	15,543	Danielson Survey,	Madera Co.
Albert Hansen	18,619	"	Monterey Co.
Walti & Pearson Ranch, Inc.	11,136	"	"
Raymond F. Reynolds et. al.	10,146	"	"
Laurette Echeberria et. al.	11,109	"	"
William Luton	13,131	"	Santa Barbara Co.
Cowell Estate	at least 15,000	Davis, Yolo Co.--over 10,000 range land	
Santa Margarita Ranch	at least 15,000	San Juan Capistrano, Orange Co. over 10,000 acres cultivated land	
Starr Ranch	at least 15,000	San Juan Capistrano, Orange Co. over 10,000 acres cultivated land	
Bryant Ranch	at least 10,000	Olive, Orange Co.--over 10,000 acres range land	
Rudnick & Mendiboro	at least 15,000	Kern Co.--range over 10,000; cultivated over 5,000	
A. Brown Co.	at least 15,000	Weldon, Kern Co.--over 10,000 acres range land	
Carver-Bowen Ranch	at least 15,000	Glennvile, Kern Co.--over 10,000 acres range land	
Carl I. Carver	at least 10,000	Delano, Fresno Co.--over 10,000 acres range land	
Crofton Ranches	at least 10,000	Keene, Kern Co.--over 10,000 acres range land	
Jameson Ranch	at least 10,000	Tehachapi, Kern Co.-over 10,000 acres range land	
Mrs. W.D. Joughin & Sons	at least 10,000	Isabella, Kern Co.--over 10,000 acres range land	

Leroy Rankin	at least 10,000	Walker Basin, Kern Co.--over 10,000 acres range land
Russell Bros.	at least 10,000	Maricopa, Kern Co.--over 10,000 acres range land
Sneddon Land Cattle Co.	at least 10,000	Maricopa, Kern Co.--over 10,000 acres range land
Carl Tweisselman	at least 10,000	McKittrick, Kern Co.--over 10,000 acres range land
Sheldon Potter	at least 10,000	Mendocino Co.--over 10,000 acres range land
Buttes Gas & Oil	13,800+	Includes Tree Crop Co., Jasmin Groves and Schenley Subsidiaries
Vener Brothers	15,100	Tomatoes
Frank C. Trosi	7,473	
P.J. Divizich	5,500	Bankrupt--in process of selling land
Zaninovich family	8,200	Zaninovich brothers compete against each other. They are: A. & N. Zaninovich--2,283; Marko Zaninovich--3,686; V.B. Zaninovich--2,157.
Donald Ramelli	8,280	
Daniel Russell	7,893	verified by owner
Schramm Ranches, Inc.	5,500	verified by owner
M.J. & R.S. Allen	9,000	Directors of Producer's Cotton Oil, verified by owner
Sam Hamburg Farms	6,000	verified by owner
Comfort Farms, Inc.	6,000	verified by owner
Superior Oil Co.	7,500	verified by owner
Frank Lanterman	6,000	La Canada Ranch

Known large holdings of unavailable acreage

S.A. Camp Farms Co.[1], United Fruit,[2] Williams Austin Co., Coello Farms[3], Shuklian Bros. Inc., McKittrick Ranch Inc., G.W. Nickel, Jr.[4], H.B. Murphy Co.[5], Harger Corp. Ltd., Liberty Farms Co., Gilkey Farms Inc., J.G. Stone Land Co., Riverview Farm & Cattle, Timco[6], Houchin Bros. Farming Co.[7], Gragnani Bros., Ridgeside Farms, C.J. Vignola, W.F. Young & W.E. Young Jr.[8], Maggie Farms[9], Summer Peck Ranch Inc., Bedart Bros.[10], Clarence Matheson, Twen Farms, Borba Bros., Joe Mendibura, Berman Leasing (Black Watch Farms?), Bogett Farming, R.A. Rowan & Co., Coberly West Co.[11], Red Fern Ranches, George B. Willoughby, Jack Elmore, D.K. Ranch, Reynold M. Mettler, V.C. Britton Co., Wolfsen Land & Cattle, Marion Harris, Em. H. Mettler & Sons[12], Hacienda Ranch, Antelope Ranch, Deepwell Ranch, Las Yeguas Ranch, Rio Bravo Ranch, Chimineas Ranch, Wells Ranch, Conner, Bonita Ranch, Laguna Seca Ranch, Chounet Ranch, Chaney Ranch, Tres Picos Farms, Tillis Ranch, Domengine Ranch, Rancho Mirage, Warners Ranch, Cholame Ranch, Howard Ranch, Turner Ranch, Henry Doelger[13], El Rico Ranch, Butler Valley Ranch[14], Rindge Family, E. & J. Gallo Winery, Harden Farms of California, Jane Macc Macchiaroli Fruit Co., Blue Goose Growers, Church Rancho[15], L.M. & V. Jacks[16]

PRIMARILY TIMBERLAND

Name	Acreage	Comments
	100,000 acres +	Comments
Boise Cascade Corp.	303,000	8,000 Nevada Co., 77,000 acres in development and repeated there--Major subsidiaries here are Sonoma Timber Co., Unco Lumber Co., verified by owner
Georgia Pacific Corp.	278,500	verified by owner
Shasta Forest Co.	479,196	151,445.84--Modoc Co. (supplied by assessor); 264,000 Lassen Co. (Metsker Map); 53,751 Siskiyou Co.
Sunkist Corp.	192,000	Through Fruit Growers Supply Co. subsidiary--192,000 for timber, Xmas trees, (68,219-Siskiyou, 45,560 Lassen Co., 74,760 Shasta Co. survey, verified by owner

Masonite Corp.	110,000	verified by owner
Fibreboard Corp.	155,000	65,000 in Pickering Lumber Corp., 25,000 in development and repeated there through Trimont Land Co.--a subsidiary, 80,000 Hobart Mills, Nevado Co., 28,978--Sierra Co., verified by owner
The Pacific Lumber Co.	171,062	Includes 5,062 acres of agricultural land in Yolo, Sutter and Yuba Counties (rice and tomatoes) and 10,000 acres of grazing land in Humboldt (verified by owner), 140,000 timber in Humbolt Co., 3,480--San Mateo Co., verified by owner
The Times-Mirror Corp.	145,000	White Mountain Lumber Co. is major subsidiary
American Forest Production	150,000+	American Box Corp. of California, Pine Logging Co. of California; Calaveras Land and Timber Corp. (49,000), Winton Co. are major subsidiaries or timber acquisitions. See Siskiyou Co. assessor survey and Danielson Surveys El Dorado and Placer Counties
International Paper Co.	103,547	Siskiyou Co. survey
Hammond Lumber Co.	119,840	Humboldt Co.--Metsker's
Diamond International Corp.	100,000	Mostly Butte Co., 10,900 in Shasta Co.
Weyerhauser Corp.	27,174.98	for growing, managing and harvesting forests--Modoc County survey (22,080-Modoc County), verified by owner
Collins Lumber Co.	80,000	Chester, Plumas Co.
Feather River Pine Mills	60,000	Feather Falls, Butte Co.
Northern Redwood Lumber Co.	32,000	26,960 in Humboldt and Del Norte Co.

Empire Redwood Co.	26,000	Sonoma and Mendocino Cos.
Hearst Corps.	66,614	21,814 Siskiyou Co. survey; 44,800 Shasta Co.
Kimberly Clark Co.	51,158	Siskiyou Co. survey
Soda Creek Forest	10,206	Siskiyou Co. survey
U.S. Plywood Champion Corp.	87,852	71,332 Siskiyou Co. survey, 14,510 Shasta Co., 2,000 Trinity Co.
Di Giorgio Lumber Co.	2,176	Sierra Co. survey
Yuba River Lumber Co.	2,101	Sierra Co. survey
Northern Calif. Lumber Co.	3,620	Trinity Co.--Metsker's
Calif.-Oregon Lumber Co.	1,960	Trinity Co.--Metsker's
Trinity Alps Lumber Co.	760	Trinity Co.--Metsker's Co.
Shasta Box Co.	19,200	Trinity Co.--Metsker's '55
Mt. Shasta Pine Mgf. Co.	3,840	Trinity Co.--Metsker's '55
R.L. Smith	63,885	Shasta Co.--Metsker's '59
Scott Lumber Co.	12,040	" "
McCloud River Lumber Co.	16,900	" "
Trinity Logging Co.	3,520	" "
Elk River Mill & Timber Co.	8,220	Humboldt Co. - Metsker's
Colbeer & Carson Timber Co.	12,500	" "
Arrow Mill Co.	6,120	" "
Arcata Redwood Co.	1,920	" "

Sage Ind. & Lumber Co.	37,280	34,080-Humboldt; 3,200-Del Norte
Ward Redwood Co.	8,720	3,520 Humboldt Co.--Metsker's 5,200 Del Norte Co.--Metsker's '50
Simpson Timber Co.	19,440	" "
Westmoreland Pacific Lumber Co.	5,120	Del Norte Co.-- Metsker's '50
Santa Cruz Lumber Co.	5,000	San Mateo Co. Assessor
Michigan-Calif. Lumber Co.	71,733	Danielson Survey, El Dorado Co.
Georgetown Lumber Co.	10,876	" "
North Fork Assoc., Inc.	4,836	" Placer Co.
J.F. Moore	2,529	" "
F. Bonnifield	2,366	" "
Pomfret Estates, Inc.	2,326	" "
R.G. Watts & Assoc.	19,520	Shasta Co. survey

Acreages Unknown

Cyprus Mines Corp., Fall River Lumber Co.[17], Union Lumber Co.[18], D.E. Ayer[19], Walker Forest, Willits Redwood Products Co., Crane Mills Co., Michigan-California Lumber Co., Red River Lumber Co., R.G. Watt & Assoc.

APPENDIX I - C:

LAND OWNERSHIP CONCENTRATION IN
SELECTED, LESS CONCENTRATED COUNTIES

Rural Counties
COUNTY OF BUTTE*

Total Acreage 1,067,520
Private Acreage 847,371

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Diamond International Corp.	85,000	10.0%
2. Parrott Investment Co.	21,870	12.7
3. Georgia Pacific Corp.	21,759	15.2
4. Southern Pacific Corp.	17,500	17.3
5. Newhall Land & Farming Co.	12,570	18.7
6. Soper Wheeler Co.	10,120	19.9
7. Elna Schore	7,830	
8. M & T Inc.	5,870	
9. John N. Graham	5,700	
10. Nathan Thomasson	5,600	
11. Mabel Safford	5,100	
12. Leah Gunn	4,760	
13. Jack Meline	4,400	
14. Richardson Mineral Springs	4,000	
15. G & M Ranches	3,798	
16. George Roney	3,700	
17. Alma Hugge	3,600	
18. Hazel D. Gianella	3,400	
19. J.M. Gainer	3,340	
20. Robert Draper	3,300	27.5

* Source: Henry Maps Survey, 1969

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COUNTY OF SISKIYOU*

Total Acreage 4,008,960
Private Acreage 1,452,667

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Southern Pacific Land Co.	179,023	12.3%
2. International Paper Co.	103,547	19.5
3. U.S. Plywood Corp.	71,332	24.4
4. Fruit Growers Supply Co.	68,219	29.1
5. Shasta Forests Co.	53,751	32.8
6. Kimberly Clark Corp.	51,158	
7. Hearst Corp.	21,814	
8. American Forest Products	20,987	
9. Beverly Enterprises	14,000	
10. Meiss Ranch Inc.	13,323	
11. Porterfield Bros., Inc.	12,852	
12. Mills Ranch	10,532	
13. Soda Creek Forest	10,206	
14. Dennis, Jeff	9,948	
15. Ed Hart, et. al.	9,674	
16. Scott, Glen	9,058	
17. Louie & Sons	8,824	
18. Frieden, Stan	7,389	
19. Criss Bros., Inc.	6,920	
20. Kel-Del Ranch	1,138	47.4

* Source: Assessor's Survey, 1970

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COUNTY OF SHASTA*

Total Acreage 2,427,520
Private Acreage 1,439,491

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Southern Pacific Land Co.	156,400	10.8%
2. Fruit Growers Supply Co.	74,760	16.1
3. R.L. Smith Lumber Co.	63,885	20.5
4. K. Walker et. al.	51,200	24.1
5. Hearst Corp.	44,800	27.9
6. P.G. & E.	22,480	
7. L. McConnel	20,480	
8. R.G. Watt	19,520	
9. McCloud River Lumber Co.	16,900	
10. U.S. Plywood Corp.	14,520	
11. Scott Lumber	12,040	
12. P. & J. McAuliffe	11,520	
13. Diamond Match Co.	10,880	
14. W. Hunt Estate	9,960	
15. C. Cransford	8,400	
16. E. Blodgett	5,760	
17. Crone Hereford Ranch	5,760	
18. Welch & Welch	4,480	
19. Bollibukka Land Co.	4,140	
20. Foundation Stock Plants Inc.	3,840	39.1

* Source: Metsker's Map Survey (1959 records)

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COUNTY OF SIERRA*

Total Acreage 612,480
Private Acreage 229,278

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Fibreboard Corp.	28,978	12.7%
2. Southern Pacific Land Co.	25,852	23.9
3. Ramelli, Donald	8,280	27.5
4. Russell, Daniel (dir. of So. Pac., & Tenneco)	7,893	31.0
5. Trosi, Frank C.	7,473	34.3
6. Monarch Investment Company	5,717	
7. Sierraville Properties	4,520	
8. Webber, G.D. & E.	3,626	
9. Sierra Pacific Power	3,430	
10. Johnson, Clifton O.	2,942	
11. Roivley, Sterling H.	2,496	
12. Di Giorgio Lumber Co.	2,176	
13. Yuba River Lumber Co.	2,101	
14. Graeagle Land & Water	2,054	
15. Turner, Frank	1,937	
16. Genasci, A.R.	1,853	
17. Torri, Kenneth	1,800	
18. Vanetti, Alice	1,558	
19. McPherrin, Anastasia	1,482	
20. P.G. & E.	1,406	48.9

* Source: Survey by John Elam et. al., U.C. Davis, 1970

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COUNTY OF NEVADA*

Total Acreage 624,000
Private Acreage 438,483

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Southern Pacific Land Co.	59,958	13.6%
2. Pacific Gas & Electric	12,750	16.5
3. Taylor, A., et. al.	9,418	18.5
4. May, W.	7,213	20.2
5. William Austin Co.	6,247	21.5
6. Fibreboard	5,357	
7. Johnson, D.	4,897	
8. San Juan Gold	3,995	
9. Sierra Pacific Power Co.	3,905	
10. Hoffert Co.	3,840	
11. Walton, J.E., et. al.	3,590	
12. Boise Cascade	3,269	
13. Peacock, J.C.	3,021	
14. Viscia, A.A.	2,882	
15. Robinson, Guy	2,484	
16. Nicholls Estate Co.	2,441	
17. Spring Valley Land Co.	2,155	
18. Graham, R.K.	2,081	
19. McAllister, J. et. al.	1,954	
20. Bancroft, J., et. al.	1,818	32.5

* Source: Assessor's Survey, 1970

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COUNTY OF HUMBOLDT*

Total Acreage 2,295,040
Private Acreage 1,635,874

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Pacific Lumber Co.	140,000	8.5%
2. Hammond Lumber Co.	119,840	16.2
3. Sage Land & Lumber Co.	34,080	18.4
4. Northern Redwood Lumber Co.	26,960	20.1
5. William Smith	25,760	21.7
6. C.G. & L.W. Wiggins	23,680	
7. R. Hunter	19,640	
8. Hill-Davis Co.	18,325	
9. Merillon & D'Oultremont	13,240	
10. Tooby & Prior	13,000	
11. Dolbeer & Carson Lumber Co.	12,500	
12. California Barrel Co.	11,680	
13. Jos. & S.A. Russ	10,000	
14. D & O Schanon et. al.	9,600	
15. Ogletree Land Co.	9,540	
16. Elk River Mill & Lumber Co.	8,220	
17. C.R. Barnum	7,680	
18. A.W. Mather & H.A. Truslow	7,680	
19. Fortuna Development Co.	7,680	
20. McKay and Co.	7,040	32.3

* Source: Survey of Metsker's Maps, 1958

COUNTY OF LASSEN*

Total Acreage 2,919,040
Private Acreage 1,113,804

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Shasta Forests Co.	264,000	24.0%
2. Fruit Growers Supply Co.	45,560	28.1
3. Rocky Hill Inc.	14,920	29.5
4. W.H. Hunt Est. Co.	14,440	30.8
5. T.E. Connoly	13,400	32.0
6. J.W. Mapes	13,400	
7. W.H. Roupp et. al.	13,040	
8. Flourney Bros.	12,280	
9. Hansen Cattle Co.	12,020	
10. G.R. Heath	11,520	
11. N.H. Monroe	9,720	
12. W.M. Smith	9,200	
13. C.F. Stone & J.T. Bath	8,940	
14. McClean Ranch Co.	7,680	
15. A.R. Hughes et. al.	7,000	
16. Lloyd S. Whaler	7,000	
17. S.S. Jaksick	5,000	
18. A.S. Walton family	4,480	
19. Pierre Mendibourne	4,160	
20. L.W. Kramer	4,000	43.7

* Source: Metsker's Map Survey (1959 records)

COUNTY OF SAN MATEO*

Total Acreage 286,080
Private Acreage 259,467

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Westbay Community Associates	10,152	3.9%
2. Deane & Deane, Inc.	8,000	6.9
3. Leslie Salt Co.	7,343	9.8
4. Ideal Cement Co.	6,113	12.1
5. Santa Cruz Lumber Co.	4,976	14.0
6. Theodore Char, et. al.	4,319	
7. Pacific Lumber Co.	3,480	
8. Crocker Land Co.	3,082	
9. Purisima Canyon Assoc.	2,513	
10. Leland Stanford Jr. University	2,478	
11. Carver Ranch	2,258	
12. R.E. Crummer, et. al.	2,225	
13. Crummer Corp.	2,125	
14. Ox Mountain	2,012	
15. Consolidated Farms	1,987	
16. Ainsley Corp.	1,826	
17. Emma Muzzi	1,788	
18. Joseph Cabral	1,659	
19. California Water Service Co.	1,471	
20. Rudolph W. Driscol	1,464	27.4

* Source: Survey of Assessors, 1970

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COUNTY OF VENTURA*

Total Acreage 1,192,320
Private Acreage 53[illegible],[illegible]

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Getty Oil	17,679	3.3%
2. Newhall Land and Farming	15,443	6.1
3. Adrian Woods	12,504	8.5
4. Union Oil Company	9,744	10.3
5. Kay Investment Company	8,899	11.9
6. Danielson, Richard E. Jr.	7,115	
7. American Hawaiian Steamship Co.	7,078	
8. Rancho Guadalasca (J. Broome et. al.)	6,785	
9. Bob Hope	6,466	
10. Adams Canyon	5,818	
11. Fred Smith	4,621	
12. Rancho Sespe	4,246	
13. Flying "H" Ranchos	2,899	
14. Kaiser Aetna	2,610	
15. Moreland Investment Co.	2,421	
16. Elstree Ltd.	1,913	
17. Lang Ranch	1,788	
18. Camulos Ranch	1,770	
19. Limoneira	1,726	
20. North American Aviation	1,360	22.3

* Source: Survey of Assessors, 1970

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COUNTY OF SACRAMENTO*

Total Acreage 624,000
Private Acreage 567,215

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Crocker Anglo National Bank	12,908	2.3%
2. Aerojet General Corporation	12,382	4.5
3. Gill, John S. et. al.	10,383	6.3
4. Schneider, John et. al.	7,557	7.6
5. Ella Corp.	5,281	8.5
6. Rodden, William L. et. al.	5,104	
7. Valensin/Valensin Trust of	4,989	
8. Van Vleck, Stanley	4,384	
9. Gau, Louis	4,066	
10. McDonnell-Douglas Aircraft Inc.	3,958	
11. Wilson, George & Bertha	3,919	
12. Newton Trust Fund Operating Engin.	3,534	
13. Hamel, Richard H.	3,000	
14. Graham, Charles E. & Joseph E.	2,998	
15. Silva, Faustino Sr.	2,960	
16. SMUD (Sacto. Municipal Utility Dist.)	2,400	
17. Simas, Antonio	2,200	
18. Lombetter, Lester C.	2,025	
19. Wood, Margaret & Finn, Eleanor	1,922	
20. Cavitt, S.H.	1,908	17.3

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* Source: Survey of Assessors, 1970

COUNTY OF TRINITY*

Total Acreage 2,042,880
Private Acreage 571,081

THE TWENTY LARGEST PRIVATE LANDOWNERS IN COUNTY BY ACREAGE

Corporation or Individual	Acreage	Cumulative Private %
1. Southern Pacific Land Co.	197,160	34.5
2. Shasta Box Co.	19,200	37.9
3. Dean Witter Jr., et. al.	18,040	41.0
4. R.G. & E. Jameson	10,920	43.0
5. William C. McCulloch	10,600	44.7
6. University Hill Foundation	9,480	↓
7. Favell-Utley Realty Co.	4,320	
8. S.E. Underwood	4,320	
9. Mt. Shasta Pine Mfg. Co.	3,840	
10. N. Calif. Lumber Co.	3,620	
11. Roger Jessup Farms	3,200	
12. Frank M. Crawford	2,240	
13. U.S. Plywood Corp.	2,000	
14. California-Oregon Lumber Co.	1,960	
15. S.F. & C.B. Mitchell	1,800	
16. M. Tyson et. al.	1,600	
17. John A. Shaw	1,500	
18. Nielson Motor Co.	1,500	
19. George Dear	1,000	
20. Oscar O. Davis	1,000	52.5

* Source: Survey of Metsker's Maps, 1955

Rural Counties
COUNTY OF SISKIYOU

Corporation or Individual	Property Tax Paid	Appraisal of Property	Acreage Owned
1. American Forest Prod.		1,980,250	20,987
2. Fruit Growers		3,832,670	68,219
3. Hearst Corp.		1,757,255	21,814
4. International Paper		12,775,655	103,547
5. Kimberly Clark Corp.		2,149,100	51,158
6. Shasta Forests Co.		973,920	53,751
7. S.P. Land Co.		14,000,060	179,023
8. U.S. Plywood Corp.		14,142,915	71,332
9. Friden		1,012,000	7,389
10. Meiss Ranch		1,069,000	13,323

COUNTY OF NEVADA

Corporation or Individual	Property Tax Paid	Appraisal of Property	Acreage Owned
1. Pacific Gas & Elec.	$580,000	$8,279,000	12,750
2. Pacific Telephone	266,000	3,802,000	13 (approx.)
3. So. Pacific Land	154,000	2,196,000	59,958
4. Boise Cascade	75,000	1,074,000	3,269
5. Sierra Pacific Power	71,000	1,013,000	3,905
6. So. Pacific Rail	65,000	930,000	1,200 (approx)
7. Fibreboard	35,000	496,000	5,357
8. May, W.	31,000	440,000	7,213
9. Southern Pacific Pipe Line--SPR r/w	25,000	362,000	utilizes SPR right of way
10. Spring Valley Land	20,000	279,000	2,155

COUNTY OF MODOC

Corporation or Individual	Property Tax Paid	Appraisal of Property	Acreage Owned
1. Weyerhaeuser Co.	$51,363.78	$ 690,245	27,174.98
2. Shasta Forest Co.	35,091.37	509,320	151,445.84
3. Leisure Ind., Inc.	27,164.40	388,385	19,522.55
4. McKinley & Unruh	25,818.00	335,000	10,976.92
5. Calandor Pine Corp.	20,037.77	261,365	804.90
6. Grace, Willoughby T.	18,595.31	249,640	25,045.37
7. Flournoy, D.F.	12,277.65	159,450	3,434.51
8. H.C. Cattle Co.	10,480.34	136,245	6,965.41
9. Cockrells, Inc.	10,419.94	142,200	4,804.29
10. Stewart, Walter	10,194.71	135,325	8,986.28

the appropriate patents, it is entitled to ignore the regulations which governed the issuance of the patents as well as vital conditions of the original grants.*

4. Agricultural Lands and Piracy of Water

Another way in which the Southern Pacific makes money today from the land originally given to it for the construction of the railroads is by leasing agricultural land to farmers. Approximately one-third of the six million dollars annual net profit on land-grant lands comes from this type of activity. There are approximately 150,000 acres of irrigated farm land in California owned by SP. Mr. Van Loben Sels assured us that the company sends its agriculture experts around annually to insure that the farmers to whom it leases are handling the land properly. The arrangements made by Southern Pacific with the farmer provide that SP will pay the property taxes (although later to be reimbursed), and will receive a certain percentage of the profits. The statement was made that Southern Pacific doesn't even like to consider doing business with a farmer unless he has large amounts of land, machinery, and money.

Southern Pacific's leasing of agricultural lands should be mentioned in terms of its relationship with the Westlands Water Project, on the west side of the San Joaquin Valley. SP is the largest landholder in the Project, with 120,000 acres and its influence on recent events cannot be overlooked. In the Westlands Project (referred to at much greater length Chapter III), large landholders have presistently disobeyed the regulations concerning the maximum size parcels eligible for federal irrigation subsidy. Southern Pacific, by virtue of the fact that it has received federal water for many years without complying with the 160-acre maximum plot stipulation, has seen the value of its once worthless land increase many times--at the cost of the individual taxpayers financing the water projects. While blatantly violating the law to send the value of its land up, the SP is sucking the valley dry, causing subsidence of the soil with their own wells. Meanwhile, SP looks for federal help to replenish its sinking underground water supply. Clearly this particular type of land use was neither intended nor expected when the original land grants were issued.

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* In 1921, SP created Pacific Oil Company. For Pacific Oil's first move, it paid $43,750,000 to SP for 259,000 acres, most of which was proven oil land. Southern Pacific provided the funds for the purchase by subscribing to 3.5 million shares of Pacific Oil's stock, which it then passed on to its own shareholders. Southern Pacific created a subsidiary, which was entitled to the mineral rights, the possession of which SP perhaps saw threatened. Pacific Oil later became Standard Oil.

APPENDIX II - H:

1969 ASCS SELECTED SUBSIDY RECIPIENTS IN CALIFORNIA:*

1969 ASCS program payments of $25,000 or more excluding price support loans and wool and sugar payments--California

[FRESNO COUNTY]

Giffen, Inc.	3,333,385
Mt. Whitney Farms	1,152,294
Vista Del Liano Farms	778,624
Boston Ranch Co.	643,006
Tellez Ranch, Inc.	503,285
Jack Harris, Inc.	475,924
Airway Farms, Inc.	360,823
Raymond Thomas, Inc.	272,280
W.J. Deal	244,755
Time	241,965
Gragnani Bros.	227,451
Schramm Ranches, Inc.	215,435
J.E.O. Neill, Inc.	215,295
M.J. & R.S. Allen	209,819
Clarence Matheson	205,755
Colt Ranch, Inc.	178,949
Redfern Ranches, Inc.	171,289
So. Pac. Co.	161,068
V.C. Britton Co.	155,252

[KERN COUNTY]

Kern County Land Co.	974,163
S.A. Camp Farms Co.	928,917
B.V. Frms & Miller & Lux	292,961
W,B, Camp & Sons	267,559
Santiaga Ranch	243,366
Houtchin Bros. Farming	232,163
Giumarra Vineyard Corp.	227,539
Ridgeside Farms	226,709
C.J. Vignolo	225,797
Maxxie Farms	207,146
Twin Farms	201,683
Joe Mendiburu	195,290
D.M. Bryant Jr.	182,994
Coberly-West Co.	171,367
M. & I. Farms	159,463
Reynold M. Mettler	156,463
EM H. Mettler & Sons	152,902

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* Those receiving over $150,000 are listed

B. SUBSIDIES FROM "OUTSIDE" CORPORATE FARMS

In general, California farmers have had years of exposure to corporate-type farming and thus are perhaps less alarmed by the "corporate invasion" than their counterparts elsewhere in the country. Farmers who were interviewed by us differed considerably in their reactions to the entry of nonagricultural corporations into the farming business: Their reactions fell into three categories:

(1) The "young turks", typified by the Davis and Cal Poly graduates, are currently using modern business methods and eagerly seek out the latest in farming techniques. They are optimistic about their adjustment thus far and feel that they will continue to be able to compete effectively. If they can't or don't want to compete, they can still remain in farming since they are attractive candidates for managerial positions.

(2) Older farmers (those over fifty years old) and farmers near retirement have few alternatives. Many of these farmers have achieved their lifelong goal of getting out from under a debt umbrella and now own their farms in full. Unencumbered by debt and with very considerable assets in the form of their land, these men are more likely to farm "just to keep busy" and will phase out and retire in ten to fifteen years. They are not concerned with more rigorous competition.

(3) The farmers who feel most affected are the younger men who have only limited assets. With their capacity impaired to respond to newer technology and the need for larger land units, they will find it increasingly hard to pay their debts and at the same time earn a satisfactory living in agriculture. The choice that many make is to sell out and seek employment in fields other than agriculture.

One San Joaquin Valley farmer interviewed by us said, in effect, that given the same resources of land, tax privileges and equal access to credit, the individual farmer "can beat the pants off any corporation" in efficiency and management. There was no doubt as to this farmer's willingness and ability to try just that; however the givens that he asks for may prove troublesome to come by. The resources that he needs are not his for the asking, and they may not be his for the buying either.

The disadvantages faced by the non-conglomerate, non-outsider are the direct result of public laws or regulation--or the discriminatory lack thereof. This is ironic given stated public policy. For example, we read in the Agricultural Act of 1961 that "It is hereby declared to be the policy of Congress to:

> ...Recognize the importance of the family farm as an efficient unit of production and as an economic base for towns and cities in rural areas and encourage, promote, and strengthen this form of farm enterprise.

1. Tax Policies

It is clear that federal and State tax policy is one of the main factors encouraging large corporations to go into farming. Substantial capital gains, favorable depreciation rates on equipment and machinery, and tax losses written off against nonfarm income are major benefits that return sizeable tax savings to absentee investors and thereby permit them to operate with a cost structure entirely different from that of the small owner-operator (whether he is incorporated or not). The independent operator who earns a living entirely from farming is able to make some use, of course, of depreciation and capital gains provisions. But because the independent farmer is far less likely to have taxable nonfarm income agains which to offset farming losses, the tax loss advantage accrues substantially to the corporate or outside investor.*

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* In 1963, Secretary of the Treasury told the House Ways and Means Committee that tax policies "create unfair competition for farmers who may be competitors and who do not pay (cont'd.)

Federal tax laws (duplicated by California tax laws) substantially subsidizes outside investor or large non-farming, corporate entry into farming. A concrete example best illustrates the consequences of the law. Let us take Conglomerate A, which buys 10,000 low grade acres at $300 per acre (a 3 million dollar expenditure). Now we shall skip all of the tax, etc. breaks our Conglomerate A has that Farmer Brown, Inc. also can use to great benefit (the Williamson Act, federal price support payments, et. al.)

First, let us take investment write offs. Conglomerate A invests $1 million each year for five years in irrigation and soil improvements on his heretofor low grade land. He is able to deduct each year this $1 million from his profitable operations elsewhere --profitable operations Farmer Brown, Inc. does not have. With a 50% corporate tax rate, this means a $500,000 annual tax gain Conglomerate A would otherwise have to pay each year. Over five years the savings comes to $2.5 million. Conglomerate A has managed a 31% return on total expenditures in tax savings alone over five years, and a 50% return on the improvement investment which is not available to Farmer Brown, Inc. This subsidy of investment enables Conglomerate A to expand, adjust and take advantage of technological innovation. In other words, although these improvements will certainly add value to his property, probably more value than the investment lost, he is taxed as if he has had a net loss. That is, Conglomerate A is taxed as if it had a net loss of $1 million per year on these investments. But after the five years, or whenever it desires, Conglomerate A will most likely sell for $8 million plus. The $5 million in improvements

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costs and expenses out of tax dollars but who must make an economic profit in order to carry on their farming activities." (See Robert Dietsch, "The Merger Boom, Who Owns What?," New Republic, February 22, 1969, p. 15).

In the same vein, Orville Freeman said when he was Secretary of Agriculture that "there could be real trouble if (the conglomerates) move into agriculture....They already have contributed to the building up of land values. They can go in and farm and write off their losses as a tax deduction on a very profitable operation elsewhere. When this happens, dangerously unfair competition takes place." (See Tax Reform, 1969, p. 2070.)

actually adding at least that much increase (not decrease) in the value of that land. When Conglomerate A sells, it will not have to make up that $5 million in tax write off from investments which were not losses, but gains.*

Second, when Conglomerate A makes the sale, not only will it gain, but its gain will be taxed at half the tax rate for income. This is an advantage both Farmer Brown, Inc. and Conglomerate A enjoy, but Conglomerate A can use it to greater advantage. Land to Conglomerate A is merely another corporate asset, to be disposed of when tax and investment demands dictate. Conglomerate A knows that it can invest in value escalating farm land for pure speculative gain at an opportune time given losses or needs of other enterprises. More important, as long as appreciable gains can be made from land sale, the corporation can and will accept a low rate of return on crop production, etc. itself. This drives Farmer Brown, Inc. out of business because he is attached to the land, without other enterprise, and dependent upon adequate rates of return from agricultural activity. Gene L. Swaknamer, an agricultural economist with the Federal Reserve Bank of Kansas has remarked:

> Past rates of appreciation on farm land and rural real estate have been impressive. Although there is no assurance of continued increase in land prices, acquisition of farm land remains an attractive inflationary hedge for firms with adequate liquidity. Because of other considerations such as rapid transportation, urban sprawl, population growth, and expanding recreation needs, land may be acquiring a renewed investment appeal.**

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* Further, the capital gains law has the effect of giving the investor a free loan, with the public footing the interest charges through tax deficiency. That is, Conglomerate A can use the first $500,000 tax saving amount for five years (until he sells the land) without paying any taxes on the gain. The next $500,000 (the second year) he uses for four years, etc.

** In Gene L. Swaknamer, "The Growth of Corporate Farming," Monthly Review of the Kansas City Federal Reserve Bank, (May 1968), p.5. Mr. Swaknamer also wrote:

> A study of the rates of return on farmers' equities in California...suggests that returns are low and apparently decreasing. Yet farmers (including corporation farmers) continue to invest their savings in agriculture."

But is this agriculture that these "farmers" are investing in? Franklin Reiss ("Is $900 per Acre Too Much for Farmland?" Illinois Agricultural Economics, July 1968, p. 23) recently

A third tax advantage lies in Conglomerate A's depreciation write off skills and flexibility and in operating cost write offs. For if our Conglomerate A decides to plant tree crops (with the exception of citrus), then he can deduct as operating costs all the expenses which go into caring for the trees until they are ready to bear. Then Conglomerate A can sell this land after the trees are ready to bear fruit, just before harvest. And we can expect that the value of the land has greatly appreciated as a result of these fruit bearing tress. After sale, all of this appreciation can be considered a capital gain. That is, expenses are deducted from income, but the gain from these expenses are now not considered "income" but capital gains and taxed at half the rate income is taxed.*

This gimmick is of sufficient effect that a total stop had to be put to the practice in citrus orchards. As the Commerce Clearing House said in their Explanation of the Tax

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(cont'd. from prev. page) wrote: "Many people who invest in farmland may...simply count on capital gains occurring that is, a rise in the value of the land."

The data substantiate Reiss' judgment. For example, according to U.S. Department of Agriculture Economic Research Service statistics, farm income has not even kept pace with inflation- nationally or in California (see Farm Income-State Estimates 1949-1968, August 1969). The same agency, however, reveals that farm real estate value per acre has been rising markedly in the U.S. and even more so in California. (e.g.,"1935= $25 per acre, 1940= $26 per acre, 1945= $49 per acre, 1950= $58 per acre, 1955= $79 per acre, 1960= $116 per acre, 1965= $160 per acre, 1969= $186 per acre." Farm Real Estate Market Developments, Appendix, p. 6) San Joaquin Valley Irrigated Orchard land is increasing in value at an even faster rate: 1965= $1230 per acre, 1969= $1900 per acre (California Crops and Livestock Reporting Service, A Report on California's Principle Crop...)

* The 1969 Tax Reform Act limited this loophole to some extent. For example, assume Conglomerate A spends $60,000 per year on its orchards and this is his only cost. It then decides to sell its orchard after he develops it for, say, two years, At this time, assume that the orchard is worth $120,000 more than it was when the Conglomerate bought the land. Before the 1969 Act was passed, the entire $120,000 could be treated as capital gain; now the farmer must subtract $35,000 (the amount of deductions in excess of $25,000) from the $120,000 which previously could be treated as capital gain. (If the farmer took less than $60,000 per year in tax losses, then he will be able to subtract less of it from the $120,000 capital gain and more of it from "income".) That is, after (cont'd.)

Reform Act of 1969 (p. 198):

> The tax advantages of being able to deduct currently the costs of developing a citrus grove has apparently resulted in speculative plantings of orange groves, overproduction, and low selling prices. To remedy this, the new law requires capitalization of all amounts spent for purchase, planting, cultivation, maintainance or development of any citrus grove within four years after the trees are planted.

So far, no such protection has been given to the growers of other tree crops.

Moreover, the State of California's response to the minimal closing of this corporate loophole for its tax system betrays its commitment to the corporate farm. Appendix II - D briefly presents the story of unsuccessful efforts to apply the usually routinely approved federal tax charges to the State system.*

These tax loopholes and advantages for the conglomerate are not of mere academic concern. In 1966, 108 individuals with annual incomes of more than $1 million were involved in

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(cont'd. from prev. page) $25,000 per year in "losses," any further "losses" (investment in land) will reduce the capital gain by that amount--acting as a capital loss. This is as it should be, but if the farmer had a profitable operation overall (i.e., if he did not lose any money in his farming operation), then the entire $120,000 could be treated as capital gain and the farmer would have succeeded in converting his capital development costs for the orchard into operating costs so that a greater percentage of the final selling price of the orchard will be taxed at the lower capital gain rate. Further, there are other holes in this loophole "closing" measure, see below.

* To understand the importance of the potential gains to the farmer as a real estate speculator, we must understand that:

> the net capital gains on California farm real estate would have totaled about $12.3 billion between 1950 and 1966 had farmers sold out at values used by the USDA in computing the January 1, 1966 Balance Sheet for Agriculture. This figure is net of an estimated $1.4 billion invested by armers in land improvement and irrigation development.
>
> During this same period net farm income, which varied from a low of $846 million in 1950 to a high of $1.1 billion in 1952, totaled only $15.8 billion for the 16-year period. (cont'd.)

some phase of farming. Ninety-three of them reported farming losses for income tax purposes. The reports of the Governor's own tax return indicate that he is among those using some of these devices to escape altogether (in his case) State tax liability, and by analogy, probably federal tax liability on substantial non-agricultural income. The Governor's repeated statements that taxes should "hurt" is evidently not meant for universal application.

2. Land and Credit Availability for Optimum Economies

A trend that has paralleled the entry of corporations into agriculture has been, as we have noted in Chapter I, the growth in average farm size and the concentration of farm land in fewer and fewer hands. Table II - F partially duplicates Table I - G, giving the average size of California farms for a number of different years. The Table also adds additional area data. Over the twenty-four year period from 1930 to 1954, the average size of farms in California increased only 37%; but over the shorter five-year period from 1954 to 1969, the average farm size jumped over 100%, from 307 acres in 1954 to 627 acres in 1969. In large measure this trend toward larger farm size has been stimulated by accelerated technological developments in crop mechanization. As farm wages rise, farmers are encouraged to substitute machinery for human labor. It is accepted that there is a direct, positive correlation between the horsepower (i.e., capacity) of a farm machine and the wages of the machine's operators. When wages go up, machines with greater capacity are purchased so that the expensive operator can get more work done. But with rapid technological change, the capacity of the machines soon outstrips the ability of the farm to use that capacity. So the only alternative is to expand the size of the farm so as to utilize fully the machinery purchased originally to cut labor costs. The net result of much of the technological change in agriculture has been an inexorable push towards bigness.

Table II - G, below, classifies the number of farms in California according to size. The total number of farms of all sizes in California has declined from 135,676 in 1930 to 80,846 in 1964. This trend may be broken down into two time periods to illustrate the impact of accelerating technical change. From 1930 to 1954, the total number of farms decreased by only nine percent. It is also informative to

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(cont'd. from prev. page) (John A. Hopkin, Vice President Bank of American N.T. & S.A., "Some Implications of Long-Term Outlook for California Agriculture on Capital Requirements" delivered to the Agricultural Economists of the Federal Reserve Banks, May 24, 1967, p. 17).

TABLE II - F:
AVERAGE SIZE AND LAND AREA OF CALIFORNIA FARMS
SELECTED YEARS, 1930-64
(in acres)

Year	Average Size of Farms	All Land in Farms	All Cropland Harvested	Irrigated[1] Land in Farms	Ir Cr Ha
1930	224	30,442,581	6,549,967	n.a.	3,5
1940	230	30,524,324	7,956,671	4,276,554	3,7
1950	267	36,613,291	7,956,671	6,438,324	5,3
1954	307	37,794,780	8,326,331	7,048,049	5,9
1959	372	36,887,948	8,021,836	7,395,570	6,2
1964	458	36,996,327	7,837,133	7,584,363	6,4
1969	527				

1 Includes both cropland and pasture.

2 Includes some duplication where two or more crops were harvested from the same land.

n.a. Not available

Source: U.S. Department of Commerce, Bureau of the Census, 1964 U.S. Census of Agriculture, 1969 figure from California Information Almanac, Bank of America, 1969, p. 285.

TABLE II - G:

NUMBER OF FARMS IN CALIFORNIA BY SIZE GROUP,

SELECTED YEARS, 1930-64

Size Group	1930	1940	1950	1954	1959	1964
Total	135,676	132,658	137,168	123,075	99,274	80,846
Under 10 acres	28,892	31.546	37,402	34,138	24,110	15,938
10-49 acres	56,985	54,467	51,760	44,342	34,570	29,474
50-99 acres	16,378	15,200	15,257	13,705	11,652	9,806
100-259 acres	16,537	15,131	15,153	13,971	12,629	10,636
260-499 acres	6,969	6,498	6,604	6,148	5,836	5,164
500-999 acres	4,861	4,551	4,853	4,523	4,464	4,096
1,000 acres or more	5,054	5,265	6,001	6,248	6,013	5,732

Source: U.S. Department of Commerce, Bureau of the Census, 1964 U.S. Census of Agriculture.

compare what happened to farms in the two smallest size groups with what happened in the two largest size groups. Over the period, 1954-1964, farms under ten acres declined by 53% and farms from ten to forty-nine acres declined by 34%; by contrast, farms between 500 and 999 acres decreased in numbers by only 9%, and farms in the largest size group decreased by only 8%. Significantly a great decline in the number of small farms and a very small decrease in the number of large farms is perfectly compatible with the growth of a smaller number of extremely large farms.

A glance at Table II - H, below, shows how the earning power of California's agriculture has changed along with the changes in the number of farms. If we consider the two periods 1954-1964 and 1955-1965 as roughly comparable, it is apparent that the increase of $1.06 billion in cash receipts over that period was paid out to a rapidly diminishing number of farms. Only two-thirds of the farms in existence in 1954 were still around to take advantage of greater earnings in 1964. By 1968, when California farm cash receipts were even higher, the realized gross income per farm in California was almost $71 thousand, more than four times the income of the national farm average.*

Why has there been this enormous increase in the size of farms and concentration of land holdings? The reason given above is that the new technology developed for farming has not been neutral to scale, that is, each new development has tended to favor larger and larger farm units. This in itself is enough to explain some of the growth of farms in a state as rich in good farmland as California. For an explanation one must turn to an examination of the advantages large corporation farms have that family farms do not have.

* * *

The question to which an answer must be sought is simple: Can family farms compete with outside corporation-conglomerate farms? The answer, unfortunately, does not come quite so easily.

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* See Appendix II - F for other comparisons between California agriculture and U.S. agriculture in recent years.

TABLE II - H

CASH RECEIPTS FOR CALIFORNIA FARMS,

BY SELECTED COMMODITY GROUPS, 1950-1968

(in thousands)

Year	Total	Fruit and Nut Crops	Vegetable Crops	Livestock and Poultry	Government Payments	Forest, Nursery, and Greenhouse Products
1950	$2,315,267	524,656	270,052	847,220	13,641	54,021
1955	2,692,172	587,400	378,047	966,602	11,970	80,836
1960	3,210,879	614,529	407,600	1,245,120	21,913	105,728
1965	3,751,402	678,346	545,001	1,424,910	41,258	176,069
1968	4,374,785	849,380	774,642	1,604,851	100,731	206,711

Source: Department of Agriculture, Bureau of Statistics.

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The first problem of the small farmer is an inability to make the expansion and innovation changes which new technology may demand. He may not be able to get the resources he needs to expand the size of his operation because he is too small to start with.

Walter Minger, a Bank of America credit officer, succinctly put the whole question of size in the proper perspective:

> People talk of corporate farming being evil, and really that isn't the problem at all. It isn't corporation farming...it's a problem of sheer size. And it's the size thing that gives you so many advantages. A major corporation has better access to credit,sure, but really it's the function of size that causes the problems in the farm sector...not just the fact that they're incorporated. The people who are trembling in their boots are the little people who don't have an opportunity to merge, grow, expand. Their farming venture is really in jeopardy because they can't compete.

Minger went on to point out some of the most important advantages of sheer size. Among those he mentioned were: bulk purchasing of all inputs, labor utilization, efficient sized blocks of crops, volume enough to interest major buyers, greater sophistication in marketing, better leverage in the market place, greater diversity and hence less risk, more financial sophistication, better projections, and use of skilled management with great depth and a high degree of continuity.

Many of the above advantages--such as management and marketing sophistication--are intangibles, so it is difficult to say just how much they benefit the larger farms. Estimates have been made, however, of the monetary economics resulting from bulk purchasing of inputs. Table II - I, below, illustrates how important these monetary economies can be and how they are correlated with farm size for a group of Kern County cash crop farms.

In discussing with farmers the matter of bulk purchasing, they readily agreed that the larger farms could save some five to six per cent of cash costs in purchasing. But few believe that this small magnitude of saving could increase net farm income by 25% or even more. In the example given in the table following, the lower base cost per acre for the 3,200 acre farm would result in an added income of $21,184, and for the 1,280 acre farm an added income of $5,069. By

TABLE II - I:

RELATIONSHIP BETWEEN FARM SIZE, COST OF CAPITAL, AND OTHER PURCHASED INPUTS

KERN COUNTY, CALIFORNIA

Farm size (acres)	Interest on Operating Capital (6% norm)	Volume Discounts: Fertlizers	Volume Discounts: Insecticides	Volume Discounts: Crop Dusting & Aerial Spraying	Total difference from base cost per acre
80	6.88%	0%	0%	0%	$0.56
160	6.52	4	0	0	-0.25
320	6.47	4	5	0	-0.53
640	6.47	4	5	12.5	-1.27
1,280	6.15	10	8.5	17.5	-3.96
3,200	5.90	10	14.0	25.0	-6.62

Source: J.E. Faris and D.L. Armstrong, Economies Associated with Farm Size, Kern County Cash Crop Farms, Giannini Foundation Research Report No. 269 (1963), pp. 73-96.

contrast, the 160 acre farm saves only $40 for its lesser amount of purchases. The difference in magnitude of cost reduction between the small and the large farms does much to explain the presence of purchasing agents on many large farms. Appendix II - G presents some current data on optimum farm size.*

Simply on the basis of the evidence presented above, one may well ask: How can the small farmer afford not to expand? How indeed! The answer is that he can't afford not to expand

* Note that the economies that do exist are often the direct consequence of tax and credit policies--not of "inherent" or, as we shall call it, "technical" economies.

and he can't afford to expand. Bank of America's Walter Minger explained the credit and financing plight of small farmers to us in these terms:

> Some of these fellows are going to have a credit squeeze, because the profit margins in farming are so poor. When you look at the capital requirements these fellows face--just to expand operations to keep efficient--with no margins to speak of, there is an inability to set up a financing plan that will repay these capital requirements. It's profits after taxes that repay debt and without the margins--without an adequate level of profits--you just can't take on a lot of term debt even though in your best interest you should do this to become more efficient, develop land, or get out from under a labor problem.
>
> Farmers can't do much about this problem and we can't do much about it. It's simply a problem of hellishly good production, highly efficient growers already, and a market condition that recognizes that we're close to surplus in everything.

Regarding the relative ease of access to credit by large corporate farms, an economist at Stanford University's Food Research Institute stated: "It's hard to generalize yet as to whether small or large farms have the easier access to credit. But farms of 200-300 acres are losing their credit base because they are losing their land and, therefore, their ability to secure a loan." It is extremely important to note that outside corporate farms and family farms (whether incorporated or not) operate in completely different capital markets. Traditionally, the local bank is the only source of credit for the small farmer, while outside corporate farms operate within a broader capital market--issuing securities and bonds as well as securing loans.

The Bank of America (B of A) is the single largest investor in California agriculture, and its 1,000 retail branch banks provide farmers and ranchers with some 850 million to a billion dollars a year in seasonal production credit. The B of A is further involved for well over a billion dollars seasonally in agribusiness. Even the B of A has felt the impact of the corporations' modus operandi. One of B of A's credit officers related to us what happened in the instance of one of its local branches:

> The outstanding example is in Salinas. Here we had two giants come in: United Fruit and Purex. They have bought up a total of, I think, seventeen grower-shippers of lettuce, celery and onions. Our bank had commercial accounts with nine of these people and seasonal crop liens with more than half. And if it wasn't our bank, it was somebody else. They did their borrowing locally...they bought locally. But when these managements were centrallized--United Fruit out of Boston, and Purex out of Los Angeles--the financial activities and hence most of the major purchasing was centralized in these areas. It had a dramatic effect on our Salinas branch.

B of A officials admit that they have a declining number of farm borrowers every year, but they are quick to point out that the totals keep going up so that they are not losing gross business. They attribute this by and large to the consolidation of land into the hands of local farm corporations, which still utilize the banks as credit sources, and also to the fact that cash inputs are growing as a percentage of total farm expenditures.

B of A credit officers were chary of admitting that their credit policies may be squeezing small farmers out of production. They claimed that even with a tight money market there was no finite limit to the amount they might want to put into agricultural financing. As to the criteria for selecting those farmers who would receive credit: "What we want to finance are people who have capability, who have proven history, who have home [market] for product, where there is some reasonable expectation of repayment of a production loan. We're trying to identify those people who're going to be around in 1980."

Agricultural economists interviewed by us disputed the B of A's claim that it is willing to provide unlimited credit to agriculture in the middle of a tight money market. The economists pointed out the obvious--that credit will go where the returns are the highest and where the risk is least. This often means that a small farmer in the midst of an expansion program will have only one bad year, and his credit will be cut off. One of B of A's own economists indirectly verified this charge: "When they get in trouble, you have a carryover for another year on their loan commitment. When do you shut it off? If you shut it off, you know they're sure to fail. If you don't shut it off, they may fail in even worse condition." It is no mere coincidence that the road to larger-sized farms has been paved with a rising number of farm bankruptcies. There is little danger

of the bankruptcy of Purex or other conglomerates from several bad years. In fact, the risk is easily bearable just from a tax deduction standpoint. Tax favoritism for these farming entities, their "deep pockets" have little to do with farming efficiency, per se. But the credit these advantages provide enable them to expand to optimum size at will. Thus, credit denial becomes, in part, a self-fulfilling prophesy. Non-corporate farms fail more not only because of a lack of other enterprises to carry them, but because they also lack credit to expand or adjust. They are not given credit because they are more of a risk to fail.

The Bank of America claims that foreclosure of a loan and repossession of a farm is the last resort. In justification, they point out that banking laws do not permit them to be in the business of farming any more than is necessary through foreclosures. The discussion above presented impressive evidence on the rising prices for farm land going into nonfarm uses. It is difficult to believe that an organization commanding the financial and management experience that the Bank of America does could not turn a farm foreclosure into a profitable venture in the real estate market, (e.g., profitable auction charges, default penalties, acceleration of interest charges, etc.) In fact, they do so quite often, disposing of well over .5 million acres over the past forty years. Other banks, as Chapter I points out are following suit. Such an incentive for profit which is not available in the case of large corporations with deep pockets, does indeed affect credit policy toward non-corporate farms.

Another source of credit until recently available to many smaller farmers in California has begun to dry up. For years it was the practice of food processors and canners to supply credit to producers in order to ensure that these producers would in turn sell their crop to the processor supplying the credit. A change is now developing in that cycle. Every major farm commodity in California is now over-produced or is on the threshold of becoming surplus. Thus, there is no longer any particular reason for a processor to finance producers because there is no longer any problem securing an ample supply of produce. Coupled with this has been a decline in profits, increase in the cost of carrying large inventories, the high cost of money, and a decreasing amount of competition on the supply side. So there are many incentives to get a processor out of the credit business and none to keep him in it. Many of those farmers who were cut off from processor financing have no other credit alternative. The president of John Deere & Co. said the following about the availability of credit to the small farmer:

> To us credit is a sales tool. We provide it because we must (because the banks don't)...The paper we accept from dealers higher rates than the banks charge for such paper and our rates are as low as any in the industry...Surely the limited availability of credit from other lower cost sources must be a factor in the situation.*

There are additional reasons for large corporation-conglomerate success and interest in agriculture. One is disproportionate enrichment from the subsidies described below. Another is the political power available to these entities through campaign contributions, etc. in the influence of major public works adding to the value of their land. Adding value for capital gains through school, highway, airport locations is no new phenomenon for these interests, but they are also doing it for farming profits--the tax advantages described above enabling them to exhibit fiscal courage here too. Reclamation, specifically water projects making specialty crop production possible to conglomerate holders of land is a direct subsidy. It is discussed in Chapter III, below. But it should be understood that the arid western lands of California are mostly owned by large corporate landholders such as those conglomerates listed above. These lands, when irrigated by even very expensive water, can turn a profit by growing high priced crops like tree crops, grapes and cotton. For the tree crops and grapes very little additional acreage can mean a very large percentage increase in production. When the water is publicly subsidized,the advantage is even greater.

One writer who studied the effect of these irrigation projects concluded that "There can be little doubt from the data analyzed that reclamation had a significant effect on U.S. agriculture. Increased production on reclamation-served land has...reduced non-reclamation farmers." 11

A recent study has analyzed the effect of the San Joaquin West Side Development on the prices of selected crops. This study estimated that one effect of this project would be to depress the price of deciduous fruits from 5 to 7%, almonds from 4 to 8%, grapes from 9 to 17%, cantaloupes from 7 to 17%, other vegetables from 4 to 7% and early spring potatoes from 42 to 80%. [12]

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* Mr. Hewitt also added: "We do not attract this business by taking excessive risks. Our credit standards have been high...(and) our losses have been minor." (see William A. Hewitt, Speech before the Board of Governors of Federal Reserve System, Financial Small Business,Government Printing Office, p. 364.)

III. FARM SUBSIDIES

Agriculture enjoys enormous subsidization. One program alone provides more support than all of the monies, federal state and local, paid to welfare recipients. Although many of these subsidies can be traced to agriculture's long-standing political power, two conditions unique to agriculture are usually cited to justify them.

First, agriculture suffers from chronic overproduction.* This overproduction arises in part because too many people and resources remain in agriculture, and in part because of agriculture's economic structure. That is, although the demand for food remains relatively fixed (people need a certain amount of food and no more), an individual farmer can increase his income only by producing more. When all farmers act this way, they overproduce. Because of the fixed demand for food, the prices then drop so low farmers acutally get less total return than if they had produced less.

Second, largely because of the tendency to overproduction and the inflexible demand for food, farmers suffer from severely fluctuating prices. For after a crop has been overproduced one year so that the price goes through the floor, many farmers will switch to another crop. When the price shoots way up, farmers start growing large amounts of the crop again, and the cycle repeats itself. In addition, market variations from year to year in climate and pest infestation mean that farmers cannot control too closely the amounts they produce, leading to further fluctuations in price between good and bad years.

With few exceptions we found that despite their huge cost, the subsidies aggravate or at least do not solve the basic farm problems that purport to justify them. The subsidies help redistribute income from workers to growers and from small growers to big growers. They encourage wasteful, badly balanced and destructive use of farm resources. Finally, they cost more than the public even begins to suspect while the benefits to the public are limited. They misallocate resources between agriculture and other sectors of the economy. Even within the food production industry, those harvesting the sea do not receive such favors. We shall examine in detail the four major kinds of subsidy applicable to California agriculture:**

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* Overproduction in the sense of producing more than people will buy at prices allowing farmers a profit, not in the sense of producing more than people would eat if they could afford it. Even if all Americans could afford a decent diet, however, agriculture would still overproduce, only at a higher level.

** In addition to these, there are numerous other forms of subsidy including tax loopholes (e.g., the Williamson Act), the exemption from regulation for the transportation of agricultural produce (lower rates), free or low cost tuition at State agricultural colleges, etc. .

1. Income maintenance subsidies. Both the federal government and the State of California provide subsidies in the form of payments or special legislation to increase farm income, and to deal with the income problems of overproduction and fluctuating prices.

2. Labor subsidies. Neither the federal government nor the California government gives agricultural workers the same legal rights to unionization, minimum wages and conditions,etc., that they give to other workers. Furthermore, both the U.S. and the California governments have special programs actually supplying growers with extra-cheap labor.

3. Water subsidies. The federal government, through the Bureau of Reclamation, State of California and regional and local water agencies, supply growers with cheap water at the expense of taxpayers and power users.

4. Research subsidies. The federal government and to an even greater extent, the California government, supply funds to the University of California for research on growers' problems. Other industries must pay for their own research.

We analyzed these subsidies with four questions in mind. First, how do the subsidies affect the basic farm problems of low income, overproduction and unstable prices? Second, how do the subsidies affect the distribution of income, from workers to growers, and from small growers to large growers? Third, how do the subsidies affect the use and misuse of resources in agriculture? Finally, how much do the subsidies cost and benefit the general public?

A. INCOME MAINTENANCE SUBSIDIES

On March 24, 1970, Senator John J. Williams of Delaware rose on the floor of the Senate to deliver what has become for him a routine annual message:

"Mr. President, for many years I have been critical of the large cash payments that, under our agriculture program, are being paid to the large corporate type farming operations.

"In my opinion, if this program is to be continued, these payments should be limited not to exceed $20,000 per person.

"Today I have received a report of all cash payments in excess of $25,000 that were made in 1969 but to save space in the Record, I have limited this report to a $60,000 minimum...

"Significantly this report shows that one company, J.G. Boswell Co., of California, received $4,370,657.

"Giffen Inc. of California, received $3,412,867.

"Seven companies received in excess of $1 million each.

"Fourteen companies were paid between $500,000 and $1 million each.

"Fifty-four companies were paid between $250,000 and one-half million dollars each.

"These are not small farmers..."

Senator Williams actually made a mistake about J.G. Boswell. Boswell also owns the Boston Ranch Company, which received $643,006, boosting Boswell's total take to $5,013,663. Russel Giffen is also partner of Price Giffen, who received $81,482 and Michael Giffen received $76,142. Both Giffen and Boswell may have received even further subsidies from other holdings.

Of the top eleven subsidy receivers nationwide, ten are in California. Aside from Boswell and Giffen they are: South Lake Farms, Salyer Land Company, Mt. Whitney Farms, Kern County Land Company, S.A. Camp Farms Company, Vista del Land Farms, Westlake Farms, Vista del Llano Farms. Of the 103 recipients of payments over $200,000, forty-six or 40.7% of the total are in California. Arizona and Hawaii follow California with twenty-two and twenty-one respectively. Of the 415 receiving $100,000 or more, one lucky recipient of $127,995 is none other than the Standard Oil Company. In other words, California unquestionably gets the lion's share of the federal agricultural bonanzas.

These big payments, however, represent only the most conspicuous part of the federal subsidy program. Thus, thanks to Senator Williams' efforts, although a limitation on payments of at least $55,000 has recently passed the Congress, the agricultural subsidy program will remain essentially unchanged.*

Despite their traditional independence, farmers have a long history of organizing to demand government interference in the free market on their behalf or to attempt monopoly control over the market for some given commodity. In 1933, they finally found sufficient support in Congress to win passage of the Agricultural Adjustment Act, the first special government program to manage farm income, prices, and production. Roosevelt's archenemy, the conservative Supreme

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* There are many loopholes to this limit, see below.

Court promptly declared the Act unconstitutional, but Congress successfully reenacted most of the provisions over the next few years. Although supposedly just "emergency" measures to protect the hard-hit farm population during the Depression, the programs have managed to survive fundamentally unchanged to this day, though with enough encrustations to generally prevent laymen from understanding how they work at all.

There are two basic kinds of income programs: commodity programs and marketing order programs.

The commodity programs cover the basic commodities produced in large quantities over large areas of the country, such as cotton, wheat, and corn. For these commodities, the federal government attempts direct management of farm income by what agricultural economist Marion Clawson terms the "trinity" of: production control, price support, and storage of "surplusses."

In the marketing order programs, which apply to fruits and vegetables (with some exceptions) and milk, the federal or state government essentially allows producers of a crop to design their own regional cartels and helps them enforce the provisions, or "marketing orders," as they are called. Marketing orders allow grower associations to control quality and quantity marketed and to fund advertising and research. Marketing orders have a peculiar importance in California's highly diversified agriculture; of ninety marketing orders in effect in the United States in 1966, forty-four are in California.

8. Other Federal Subsidies

Aside from the commodity support programs, the Sugar Act program, the wool program and the marketing orders (discussed below), the USDA provides a miscellany of other subsidies, some small, some not so small. A sampling:

In addition to help through marketing orders (below), milk receives its own particular kind of support from the Commodity Credit Corporation. The CCC purchases surplus stocks of more stable milk products such as butter, cheese and non-fat dry milk and stores them, thus driving up the price. Needless to say, the milk program is very expensive.

The USDA also provides so-called "section 32" assistance for the benefit of growers of all crops. Section 32 of the Agricultural Act of 1935 (PL 320) administered by the USDA's Consumer and Marketing Service, provides for "surplus removal." That is, when growers overproduce, the USDA may step in and raise the price by buying up the crop on the open market, and then usually giving it away to "needy persons" either in this country or abroad. As the USDA's booklet on the Consumer and Marketing Service boasts, "Section 32" programs are funded "without need for annual Congressional approval and appropriations" by 30% of annual duties collected on imports."[23] In recent years, Section 32 support has gone to such products as beef, butter, cheese, nonfat dry milk, turkeys, eggs, pork, lamb, dry beans, lard, potatoes, various vegetables, fruits, cotton and tobacco.[24] Presumably, the children and "needy persons" really appreciated the cotton and tobacco. Section 32 programs are administered solely for the benefit of the growers, and without any Congressional supervision at that.

The Consumer and Marketing Service also administers the famous food stamp program. As the reader may recall, a poor family can spend about $100 to get $112 worth of food stamps. Poor families do not simply get $12 of stamps free because then they would not spend that much extra on food. The food stamps ensure that they spend at least $12 more on food so that agriculture gets at least $12 in benefit for every $100.

Other functions of the Consumer and Marketing Service include meat and poultry inspection, inspection of seeds and other produce, collection and distribution of marketing information for the benefit of the agricultural industry. The Service also provides matching funds, state marketing information and other agricutlural services.

The USDA's Soil Conservation Service provides farmers with help in improving the productivity of their land. If this function seems to run counter to the attempts by the USDA's Agricultural Stabilization and Conservation Service to reduce production, well,that's agriculture. Under the Soil Conservation Service's Agricultural Conservation Program the federal government covers 50% of a farmer's costs up to $[illegible],500 a year in making such improvements as ground cover for erosion control, land drainage, land levelling and ponds for irrigation. The most valuable part of the subsidy, the advice of Soil Conservation Service engineers, comes free. Nevertheless, the program averages $5 million a year in California, and has cost well over $2 billion nationally since its inception in 1935.

Another little subsidy comes to farmers under the Soil Conservation and Domestic Allotment Act of 1936. In order to qualify for payments, farmers must undertake certain "conservation" measures. The program has been severely criticized as "paying farmers to do what they would do or should do in their own interests, anyway." For example, half of limestone use is subsidized, though farmers find the use of limestone quite profitable. The limestone producers association has blocked attempts to stop the support of limestone. In all, subsidies under this Act have totalled over $8 billion since 1936, and have increased output at least as much as assistance from the Soil Conservation Service--which leads to greater subsidy under the price maintenance programs described above-- and so it goes.

9. "Them As Has, Gits"

The USDA's support programs have succeeded moderately well in stabilizing prices and controlling production though at a high and rapidly increasing cost; they have also succeeded in raising average farm income. Nonetheless, few farm economists can be found with a kind word for them. According to Marion Clawson, "these programs seem to have fallen into a rut from which the U.S. Department of Agriculture has been unable to extricate itself; their efficacy for their stated purposes is at least doubtful and they have grown increasingly expensive." Varden Fuller, Professor of Agricultural Economics at the University of California at Davis, terms the programs simply, "perverse."

The Congressmen who carried the original Agricultural Adjustment Act through in 1933 on a wave of sympathy for the suffering farmers, intended primarily to maintain farm income. However, they made one fatal mistake: they assumed all farmers were poor. Since of course some farmers are not poor, and a few are very, very, very rich, a program which rewards production must inevitably reward those farmers proportionately more. Yet the vast majority of farmers, who really are poor, get almost nothing, --just enough, as one agricultural sociologist points out, so they will politically support the programs. As Charles M. Hardin at the University of California at Davis comments, "The windfalls of the wealthy may well be politically sustained by the pittances to the poor."[25]

The farm programs have also backfired in another way, not so obvious but equally serious. The originators of the farm programs worried also about another aspect of farm income: the returns for a farmer's labor were disproportionately low compared to the returns from his land and equipment. In other words, if the farmer had invested his

money in the stock market instead of land and equipment, and had taken a managerial job commensurate with his abilities outside agriculture, he would receive the same for his money but much more for his labor. This disproportion between returns to labor and returns to land and equipment can also be seen on the farm of the farmer's large competitor down the road, who pays his hired workers the lowest wages for any kind of work in the country. The originators of the programs did not concern themselves about farm workers; they did intend, however, to increase the returns for the independent farmer's labor.

In fact, however, the farm programs have done exactly the opposite: they have greatly increased the value of farm land at the expense of farm labor. This could have been predicted, of course, since tying price supports to production rather than to individuals (as would a welfare program) automatically enhances the value of the means of production, particularly the land. When the government then further tries to control production by reducing the land in cultivation, the price of the land goes up that much more. As Clawson puts it, "American farm policy for the past generation has been directed--often unconsciously--more towards farm property values than towards welfare of farm people." California has virtually the highest farmland prices in the nation, higher than could possibly be justified by the productivity of the land alone. Interestingly enough, this last year California farm prices did not rise for the first time since World War II, according to Varden Fuller, probably due to the rumored payments limitation before it was watered up to $55,000 in the Senate.

Whom do these inflated land values benefit? Most of all, they benefit the large landholder, both big growers and big speculators. They also benefit people investing in land as a hedge against inflation--a phenomenon that drives prices up further. They also benefit, though much less, small farmers selling out and leaving farming.

The inflated land values hurt the most small farmers who try to make a go of it performing all or most of their own work. To begin with, these farmers, if they are to survive and compete, must continually expand their operations by purchasing or renting more land and equipment; inflated land values hinder this necessary expansion. (And of course, the pressure for expansion helps inflate land values.) Then, due to the higher land cost, the farmers receive a proportionately smaller return for their labor--precisely the effect the founders of the support programs wished to remedy. For example, as Varden Fuller has calculated, given the actual

yearly growth in the value of land since 1954, a farmer in 1968 earned $1.06 an hour for his labor. If the value of land has grown only at the same rate as the value of agricultural produce since 1954, the farmer would have received $1.69 an hour.

The independent farmer does not feel this pinch on his labor directly since he receives his income from both land equipment and labor all in one bundle. But farm workers do feel the pinch both in their miserably low wages and in the rush of technology to replace them.

In short, the government farm income maintenance programs have aggravated the very problems, farm poverty and proportionately low returns to labor, they were intended to solve, while making the relatively wealthy farmers richer, at considerable expense to the public.

What should be done about farm programs? Varden Fuller is quite blunt: "Stop messing with markets." He would simply phase out farm programs over a period of five to ten years. (The farm economy has become addicted to regular federal transfusions; a sudden withdrawl would be disastrous.) Marion Clawson suggests that aside from abandoning price supports and production controls, the government could try, among other things, a system of pensioning small farmers to retire early on condition that they sell their land cheaply to the government. The government would then resell it cheaply to help remaining small farmers enlarge their operations. Such a scheme would both reduce the surplus of labor in agriculture and reduce the inflated price of land. However, whatever alternatives one may suggest (and there have been many), the present price support-production control-storage programs should be abandoned as an expensive disaster. "Section 32" programs (see above) with their "free" funding from 30% tariffs should likewise be abandoned. Sugar and wool programs will be more difficult to phase out because those industries are so dependent upon them. Nevertheless withdrawl should begin now.

The prospects for change are not good. The $55,000 limitation on payments will serve only to remove the lightning rod for criticism of farm programs. The limitation will apply only to the three commodities, wheat, feedgrains, and cotton supported by payments and will not affect loan support. Nor will it affect the sugar and wool programs. Furthermore, the limitation will be per crop and per farm owner. Thus a "farmer" with a wife and two children, growing all three crops, would theoretically face a limit of twelve times $55,000 or $660,000. In 1969, only twelve concerns received more than $660,000.

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But the entrenched attitudes of the farm bloc will prevent any meaningful change until and unless the city congressmen become disgusted and secure seniority.

Indeed, farm bloc attitudes, as much as any possible maneuvering by the chief beneficiaries of the farm programs, go a long way both to explain the failure of the programs and their continued acceptance or even popularity with the majority of farmers. For farmers, with their vaunted "independence," like to believe that government programs simply ensure them fair prices for their goods. Thus, they "earn" government payments and loan supports. Likewise, if the government wants them to produce less, it must "pay" for the production they voluntarily give up; mandatory, effective controls would impinge on their freedom. Farmers who regard their government payments and loan support in this way as "earned" income can with perfectly clear consciences complain about "those lazy bums on welfare." They can also regard Boswell, Giffen and big companies as deserving of colossal payments. According to one ASCS official, "The big operators are better farmers. They have better land, better equipment, better management and better financing. So of course they should get paid more." (By the same line of reasoning, a man earning $500,000 a year should be in a lower tax bracket than one earning $5,000.) As another ASCS official added, "Besides, they're in such high tax brackets that the government taxes most of their subsidy right back." This, however, is not always the case, as the tax advantages described above imply.

B. THE LABOR SUBSIDY

Through periodic television exposes such as NBC's recent Migrant--an NBC White Paper, Congressional outcry, and propaganda from the grape strikers, the public has long known of the miserable conditions of farm workers. In California, of an estimated 486,700 professional farmworkers (arbitrarily defined as those earning over $100 per year in farmwork), 59%, or 285,000 earned less than $1000 in a 1965 survey. The median income of these workers from farm work was $763; their median income from all work was $1388.[33]

The public probably fails to realize that the plight of farmworkers does not result from inexorable economic pressures. Farmworkers do not receive so little because farm work requires no skill, as the grape growers discovered

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* On the other hand, the value of the other functions of marketing orders, such as quality control, standardization of containers, collection of market information, funding of research, etc., has not been seriously questioned. About half of California's forty-four marketing orders have these kinds of provisions only.

when they tried to break strikes with skid row bums. Grape picking and packing requires considerable skill. Nor do farm workers endure such severe unemployment simply because the demand for agricultural workers fluctuates from season to season. Rather farmworkers suffer as they do because a powerful coalition of big growers has influenced or subverted State and federal law to successfully prevent them from obtaining most of the rights enjoyed by other workers.

In the American Southwest, California in particular, the growers have for generations assured themselves of a cheap, abundant and docile source of labor by importing large numbers of foreign workers, who depress the wages and prevent American workers from obtaining jobs. As Carey McWilliams bitterly puts it in his landmark book, Factories in the Field:

> The established pattern has been somewhat as follows: to bring in successive minority groups; to exploit them until the advantages of exploitation have been exhausted; and then to expel them in favor of more readily exploitable material.

Today's most readily exploitable material are Mexicans, imported by the hundreds of thousands in clear violation of the U.S. immigration laws. A California Farm Labor Panel commented on the extraordinary nature of this "subsidy" in 1965: "No other employers have had a special supply of imported workers at sub-standard wages and conditions, year after year."

Who pays for this subsidy? American farm laborers pay most, with their jobs, their health, and the education and opportunities of their children. City dwellers also pay, by providing welfare to support unemployed farmworkers. And, small growers pay. According to the 1964 Farm Census, 60% of California's 81,000 farms hire no outside labor while seven percent employ 75% of total farm labor. A small grower wrote Secretary of Labor Mitchell under President Eisenhower: "The cost of labor on the large farms pretty well determines the value of farm products I have to sell. A 70 hour plus week at fifty cents an hour is pretty rough competition to beat.[35]

Exploitation of farm labor began with the Spanish missions, which converted the native Indians, and punished them roundly for such "naughty" behavior as refusing to work or running away. The land grantees who took over the mission lands, took over the Indians with them, without, however, showing a great deal of concern for the Indians' souls(or even permitting them to remain in their villages). Until the mid-1860's Indians formed the prime source of labor on the great wheat farms of the time.

C. THE WATER SUBSIDY

Californians have long cherished a philosophy that water should be free, or as close to free as possible. Thus, naturally-occurring water in the State is free for the taking, or rather, free subject to the "rights" of those who took first. Likewise, the State of California and federal agencies such as the Bureau of Reclamation under the Department of Interior, generously give away water substantially below cost, at taxpayers' and power-users expense. State and federal agencies generally justify this policy in terms of "regional development," the theory that a water subsidy will return many times its value by stimulating a local economy.

Since growers who use 90% of the State's water benefit most from the "free" water philosophy, and since agriculture is the biggest industry in the State, few have questioned the justification for the water subsidy. In fact, however, not only does the public feel the effects of the water subsidy, but so do the growers themselves. First, the "free" water philosophy leads to wasteful and irrational use of water, ranging from pumping local water tables down "to China" to building such scandalous monstrosities as the State Water Project (see Chapter III). Second, the "regional development" theory leads to unjustified expansion of irrigated acreage, with resulting overproduction and drop in prices. Both these effects disproportionately hurt small growers, squeezing them out of agriculture.

D. THE RESEARCH SUBSIDY

> ...with few exceptions, growers aren't involved in their own research, relying instead on the university. And their contributions to the university are minimal. In the fiscal year ended June 30, 1967 (figures for fiscal 1968 aren't available, but they're expected to be quite similar), the university's State Experiment Station spent more than $25 million. Of this, more than $17 million was state funds, and nearly $7 million Federal funds. Less than $1.5 million was from industry.[51] (Wall Street Journal)

The University of California at Davis has spent twenty-five years studying the corrosion of fence wire. The University performs some of this research at the direct instigation of the growers on "Grower Advisory Committees;" in other cases, University researchers simply perceive a need before the growers do. The projects chosen emphasize increasing productivity and mechanization of agriculture--the kind of research that benefits the largest operators the most.

1. The Tomato Picker and Other Miracles of Modern Agriculture

Take the case of the tomato picker...

If you drive through the Central Valley of California any summer day, you will see these spectacular machines in operation. Rotating circular blades cut off the tomato vines at the ground and dump them on a conveyor belt. The belt carries the vines to the top of the machine where the tomatoes are shaken off. Then the tomatoes progress along conveyor belts one on either side of the machine, where workers standing in a row on a running board pick out and throw away green or over-ripe tomatoes. Finally, the remaining tomatoes cascade down a chute into a row of heavy brown wooden cases, labelled Hunt, Heinz, Campbell, or Delmonte, according to their destination. No less remarkable than the machine are the tomatoes, the product of over ten years of special breeding to develop the tough skins that can take this kind of treatment.

THE RESEARCH SUBSIDY *

by Polly Roberts

In September, 1968, the Wall Street Journal carried an article entitled "A Farm Subsidy You Don't Hear About". According to this article, the state universities, such as the University of California, run "a Tax-paid clinic for a major industry". For example, the Journal complains, the University of California at Davis had spent twenty-five years studying the corrosion of fence wire.[1] The university performs some of this research at the direct instigation of growers on "Grower Advisory Committees"; in other cases, university researchers simply perceive a need before the growers do. Furthermore, the projects emphasize increasing productivity and mechanization of agriculture -- the kind of research that benefits the largest operators the most.

The Journal article asks plaintively, "Couldn't and shouldn't agriculture foot more of the bill?" but,

> "But with few expections, growers aren't involved in their own research, relying instead on the university. And their contributions to the university are minimal. In the fiscal year ended June 30, 1967 (figures for fiscal 1968 aren't available, but they're expected to be quite similar), the university's State Experiment Station spent more than $25 million. Of this, more than $17 million was state funds, and nearly $7 million Federal funds. Less than $1.5 million was from industry."[2]

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* Much of this section derives from a carefully documented pamphlet by Hal and Anne Draper, entitled the Dirt on California, Agribusiness, the University.

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The machine, its matching tomato, and all the necessary changes in tomato production techniques, are the end products of over ten years of research during the 50's at the University of California's Davis campus, which spent about $1.3 million of state and federal money on the project. Blackwelder and other private firms then built and marketed the machine for an additional $2 million.[3] Today, the harvesting of virtually all processing tomatoes has been mechanized, saving the tomato industry an estimated $5.41 to $7.47 a ton.[4] On the other side, there have been social costs -- unemployment of displaced farm workers. The developers of the machine did not ignore this cost; on the contrary, they saw their endeavors precisely as an answer to the coming shortage of cheap imported labor. According to Jack Hanna, one of the developers, "I'd seen nationality after nationality in the fields; and I felt that some day we might run out of nationalities to do our hard work".[5]

Such a parochial view no longer holds total sway in the Agriculture establishment, for two agricultural economists in the Giannini Foundation of Agricultural Economics, David Sekler and Andrew Schmitz, are

publishing an article in which they try to calculate not only the monetary gain from this invention, but its cost to displaced farm workers. According to their calculations, the harvester returns between 929% and 1,288% a year on the original investment of some 3.3 million, -- a very high rate of return. (As Dr. Sekler told us, probably very little of this gain is passed on to the consumer, and not much goes to the growers; rather, the big processors like Hunt get most of it.)

But this gain is only half the equation, the other half being the loss to the displaced workers. For, according to a standard means of evaluating the desirability of economic and social changes, "It is a necessary condition to recommending a change that the gainers should be able to compensate the losers and still be better off. Strictly, this means that the gainers should be able to bribe the losers into voting for the change. It may be noted . . . that it is not sufficient that the bribe could be paid -- it must actually be paid if a change from the status quo is to be recommended".[6] Sekler and Schmitz then go on to calculate that the gainers from the harvester could have paid the displaced workers partial or even full compensation and still come out ahead. But, of course, no compensation ever was paid; therefore, "it cannot be concluded that society as a whole has benefitted from the invention of the tomato harvester".[7]

All this may sound a little abstract; after all, displacement of men by machines occurs throughout American industry. But, there are two differences. First, most American industry is unionized -- and one of the prime functions of a union is to extract compensation from employers for new labor-saving technology, either in the form of direct

cash payments, or indirectly, in the form of featherbedding or makework. As an example cited by Sekler and Schmitz, the International Longshoremen's and Warehousemen's Union receives approximately $3 million a year for "the men's share of the machine". Sekler and Schmitz calculate that were the tomato pickers compensated at the same rate (between 5 and 10% of the net savings from the new technology); they would receive between $2 and $4 million per year.[8]

Second, a point Sekler and Schmitz delicately refrain from discussing, the State and Federal governments do not normally help industries develop and finance labor-saving technology. On the contrary; most tax payers would consider it their government's responsibility to help increase employment, not decrease it. Imagine the furor should the Federal government grant General Motors money and skilled engineers to develop machinery that would eliminate auto workers! Yet the State and Federal governments routinely aid agribusiness in the elimination of farm workers. Not only aid but lead: the growers originally felt very little enthusiasm for the tomato harvester. Only the Davis scientists, forseeing "that some day we might run out of nationalities to do our hard work" undertook to develop the machine ten years in advance of the industry's need. "And lo", (as the Drapers put it) "a good working machine was ready, like Noah's Ark, to shelter them when the floods came."[9]

But the story of the tomato harvester does not end here. After the Blackwelder Corporation gained manufacturing rights to the harvester, there was "some unhappiness at the school with the handling of Cal's rights to the harvester", according to the Wall Street Journal article of June 17, 1968. For although the harvester was saving agribusiness

as much as 42 million dollars a year (by Sekler's figure of 1,288% on the original 3.3 million investment) and although the university put up 1.3 of the 3.3 million dollars for development, the university was getting back under 100,000 dollars. Regent Frederick Dutton complained loudly and publicly that the university was not getting a fair return for its work and money. After all such institutions as MIT earned many millions anually from their patent rights, while that year the university would get only about 200,000 dollars, half of which came from the tomato harvester. Dutton's complaints turned up further examples of the university's giving away its rights for little or nothing; as a result of the furor, the university ostensibly changed its policy on some items. For example, it began patenting university-bred plant varities.

Nonetheless, when the Drapers went to interview the Patent Administrator, Mark Ownes, Jr., he informed them that there was no competitive bidding for patent licenses. Rather, he negotiated the licenses informally with interested companies, for royalties ranging from 3% to 7%.

A particularly interesting case the Drapers discussed with Mr. Owens was the university's grape harvester. One Wallace Johnson, owner of a scaffold manufacturing company called Upright Inc., had asked for the license, and Mr. Owens had given it to him, at 5%. Upright had never made a farm machine before but Wallace Johnson also happened to be the Mayor of Berkeley. As Mr. Owens told the Drapers, Blackwelder (the company making the tomato harvester) "was rather mad about it", that is, about not getting a chance at the license.[10] Fortunately for the farm workers, the introduction of the grape harvester must of necessity

proceed very slowly, limited by the rate at which old vineyards can be replanted to fit the machine.

However, the grape harvester is just one of the many blessings the university bestows on the grape industry. Following is part of the project description for the project that included the grape harvester -- itself just one of many projects benefitting the grape industry, out of a total list of 674 current projects in the Division of Agricultural Sciences:

PROCESSING OF GRAPES AND GRAPE PRODUCTS

Leaders: H.W. Berg, V.L. Singleton, M.A. Amerine,
Viticulture and Enology, Davis

Objectives:
(1) To develop a system for mechanical harvesting of grapes.
(2) To develop a continuous grape processing system which will eliminate the present necessity for processing pomace in the winery. To achieve this requires the development of improved screening, pressing, sugar recovery, conor extraction and solids removal equipment.
(3) To study the fundamental aspects of microbiological metabolisms and to apply new metabolic information to commercial practice.
(4) To determine the processing and storage factors affecting wine aging, and the substances, mechanisms and reactions involved . . .
(12) To perform a needed and requested service for the wine industry by evaluating new equipment and additives pertinent to winery operation.

(Cooperative with Industry)[11]

Here is another typical project:

ECONOMIC GROWTH OF THE AGRICULTURAL FIRM

Leader: S.H. Logan, Agricultural Economics, Davis

Objectives:

(1) To identify and analyze the process of agricultural firm growth and the internal and external technical, economic, and institutional forces that influence firm growth.
(2) To study the impacts of incorporating risk and uncertainty into a poly-period growth model.

Then there are projects like this one:

FOODS -- FLAVOR, COLOR AND TEXTURE

Leaders: E. Heinz, F. Russell, Consumer Sciences, Davis

Objectives:
(1) To investigate the chemical and physical properties of foods as they relate to their desirable characteristics, as flavor, color, and texture.
(2) To study the chemical and physical changes which occur in foods during consumer utilization and handling procedures.
(3) To study the behavioral responses of the consumer to the color, flavor and textural properties of foods.[12]

It's hard to see what consumers would get out of this one, but perhaps the food-processing industry would be interested . . .

When the Drapers made their study of university agricultural research back in 1968 they asked,

> Considering all that the university has done and is doing for the growers, what has it ever done for the people who happen to comprise the majority of human beings living on the land, viz., the farm workers? Anything?[13]

The answer they found then holds true today: nothing. Indeed, out of the entire list of 674 projects, only four could be said to benefit directly even the general public: three studies of human nutrition, and one study of "insects affecting man and animals". Of the rest of the projects, a few are pure basic research, such as the "relation of protein structures to enzyme activity", while most of the remaining projects are more or less directly applicable to improving the productivity of agriculture, eg, "Codling Moth Population Management in the Orchard Ecosystem", and the profitability of agriculture-dependent industry, eg, "Consumption and Use Patterns for Dairy Products and Their Substitutes". Most of this research benefits only the large operator with the resources and economies of scale to apply it -- despite the fact that 78% of California farmers have a gross income under $40,000 a year. And of course the large number of projects like "Economics of Processing" benefit only the large, prosperous food and fibre processing

industry.

The final work of dishing research results out to agribusiness is done by the other half of the Division of Agricultural Sciences, the Extension Service. The Extension Service, a hybrid creature funded in part by the U.S. Department of Agriculture, the State of California, and the counties, and partly responsible to each. (Thus during the war years, Extension operated the bracaro programs.) Today, Extension chiefly performs what it calls "adaptive research". That is, for example, if the scientists at Davis come up with a new strain of wheat, the Extension agents will test it out on a number of "Cooperative test plots" all over the state, furnished by friendly growers. Last year, Extension operated about 5,000 such plots statewide.

Members of the Extension Service, possibly even more than their research brothers, consider themselves as primarily obligated to commercial agriculture. About half their $13 million 1970 budget went to promoting the twin goals of "Production Capacity", and "Efficiency", followed by about 20% for 4-H Club work, 12% for "Plant and Animal Protection", 7% for "Resource Conservation, Use and Development", 6% for "Family and Consumer Sciences", and 5% for "Marketing and Utilization". According to Dr. Win Lawson, Assistant State Director of Extension, in general Extension agents "work very closely with people who need information"; he cited as an example "the managers and research people on the big oil company farms". Dr. Lawson considers Extension politically neutral. "We don't take sides with anybody, union or grower. We're just employees of the University of California. Our job is to 'find the truth and tell it'."

Of last year's 13 million budget, 27% came from the Federal

Government, 56% from the State, and 17% from the counties. Federal law requires the state only to match Federal funds, but the state has always been more generous. According to Dr. Lawson, "There have been occasional attempts in the legislature to cut funds for Extension, but outcry from the farmers always stops it. I guess they figure it's a good investment".

The university scientists and Extension agents serving agribusiness are fully conscious of this bias in their work; in fact, they take a certain pride in serving only the "best" farmers and agribusinessmen. They justify their bias very simply. First, the benefits of new technology eventually trickle down to the small farmers. Second, the public as a whole benefits from more, better, and cheaper food.

There may have been some merit in this argument back in the days when a large part of the population were small farmers, and the supply of nutritious food was inadequate. But today, American agriculture suffers from chronic overproduction. This means that the only individuals who benefit from new technology are those that adopt it first, and they benefit at the expense of those who adopt it last. Thus university research in increased productivity and mechanization benefits big farmers at the expense of small farmers and farm labor. Second, overproduction means that public money invested in increasing productivity not only goes to waste, but generates the need for more expensive public programs to support the prices of overproduced goods. (One may also doubt that public support of industries like wine or tobacco contributes to public nutrition.) Finally, agriculture forms only a small part of American industry today; there is no compelling reason why its richer members should continue to benefit from such government

largesse.* The publicly supported universities should not be doing for agribusiness what other American industries can and do do for themselves.

Another kind of argument may also be raised to university research for agribusiness: while bigness may be the present trend in agriculture and may be most profitable in the short run, bigness in the form of mile after mile of the same crop is ecologically very unstable and invites drastic pest outbreaks which in turn require heavy doses of pesticides. Public resources should not be committed to a policy which in the long run may hurt everyone.

However, the research bonanza is only the most obvious part of the benefits the university bestows on big agriculture. The origin of these benefits makes a long and more than occasionally sorid story, beginning in the last century, and involving three main characters: the land-grant colleges, the USDA's Farm Extension Service, and the Farm Bureau Federation -- until recently perhaps the most effective lobby in this country.

The story[14] begins in 1862, with the passage of the Morril Act, setting aside government land for the endowment of colleges "for the benefit of agriculture and the mechanic arts". Then, in 1882, Congress passed the Hatch Act, establishing Agricultural Experiment Stations, to conduct scientific research on farming techniques. By 1900, the land-grant colleges, in alliance with the Experiment Stations, were putting

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* Research on biological control of insect and other plant pests should be an exception; not because failure to control the pests will result in any food shortages, but because until these pests can be controlled by their natural enemies, farmers will continue to spray with dangerous pesticides -- to the disadvantage of the general public. Also, biological control research, unlike most of the practical research listed in the catalogue of projects, contributes substantially to the important science of ecology.

out all sorts of pamphlets on new methods, while their professors gave lectures the farmers were invited to attend.

Meanwhile, however, the famous educator Dr. Seaman A. Knapp, seeing that these early efforts helped marginally if at all, began an experiment in a new method of agricultural education. Instead of pamphlets and professors, Dr. Knapp believed that farmers would find successful demonstrations of new techniques most convincing. Therefore, with financing from the business community, he set up a system of "county agricultural demonstration agents". These men, "county agents" as they came to be called, worked with the "best" farmers, those most willing to try new techniques.

Not surprisingly, the land-grant colleges and their associated experiment stations turned green with envy at the success of Knapp's program; in 1909, therefore, they set up their own pale imitation of Knapp's organization, the "Extension" section, to "extend" agricultural education to those who could or would not spontaneously come and get it.

In 1914, the colleges and experiment stations got full control (or so they thought) of extension work with the passage of the Smith-Lever Extension Act, tying the county agent system to the colleges and providing federal financing and coordination with the Department of Agriculture. But if the colleges had thought to gain power by this bill, they were sadly mistaken; no sooner had the Act passed than they received a "memorandum of Understanding" from the USDA, to the effect that in order to receive the money, the colleges must spend no less than 75% of it on Knapp-type Extension work, and must submit to USDA supervision and control. But the colleges' loss of autonomy soon paled besides another ill side-effect of the Smith-Lever Act that only few foresaw. One of

these was Dean Eugene Davenport who grimly predicted at a 1913 convention of educators,

> "Given four or five thousand local agents scattered among the farmers of all the congressional districts and under the practical control of a department which depends for its very life upon annual appropriations by Congress, all operating under the interlocking scheme of the new Lever bill, and we should have constructed and at work the most gigantic political machine ever devised."[15]

The outlines of this machine soon emerged. For, as under Knapp, the now rapidly multiplying hordes of Extension agents began their work by setting up committees of the leading farmers and businessmen of each county. This approach was of course perfectly logical, as this way the Extension agents could disseminate knowledge of new methods and equipment the most quickly to the most receptive audience, namely, the well-educated and prosperous "pillars of the community". The Department of Agriculture soon came to term these quasi-official committees "farm bureaus" and urged the Extension agents to concentrate their energies on actively recuriting members to spread the good word further faster. In 1917, Secretary of Agriculture Houston even called on all farmers to join bureaus in order to "stop bolshevism". By 1924, approximately three quarters of the agricultural counties in the country had bureaus; in the meantime, the county agents had slipped from their original position as organizers to that of general manager and dues collector.[16]

Naturally enough, the bureaus began to federate, first on the state level. In 1920, the first national meeting of the American Farm Bureau Federation took place in Chicago, with delegates from thirty-one states present. After organizing itself, which included establishing a "Washington representative", the new Federation announced its policy: "to keep control of our food products", to "stabilize the nation", to

"put agriculture into proper relationship with the rest of the world".[17] Despite its educational origin, the Federation listed only one "educational" aim: "To create in the urban mind a better conception of the Farmer's relationship to other units in the social and economic structure".[18]

The "political machine" completed, the Federation commenced lobbying in Washington with a "vigor and effectiveness that have seldom been equalled".[19] The Federation lobbyist quickly created a "farm bloc" of 22 senators, drafted legislation, kept a close watch on individual voting records, and even passed out questionnaires on their views to suspect Congressmen. Alarmed by this agressive assault, Congress called an investigation. The ensuing hearings revealed the whole story of the Farm Bureau Federation's origin in the organizing efforts of the USDA's Extension Service. Much to the USDA's embarrassment, J.R. Howard, the Federation's first president, even testified that he regarded the Extension agent as only a "semigovernmental employee", responsible as much to the Farm Bureau as to the government or the colleges.[20]

But these revelations came too late. Henceforth, Congress would have to live with the monster it had created.

Thus commenced a powerful triple alliance. The land-grant colleges and agricultural experiment stations perform research for the benefit of the "progressive" farmers of the Farm Bureau, and provided "objective" academic witnesses to support the Bureau's point of view. The Extension agents acted as go-betweens, recruiters and advisors for Bureau farmers, administering local USDA programs as the Bureau saw fit. In return for these favors, the Farm Bureau lobbied vigorously in state capitals and

in Washington to provide the colleges with better funding and to increase the powers of the Extension Service at the expense of any other USDA organizations with local branches. In addition, of course, the Farm Bureau Federation virtually wrote the system of federal subsidies described earlier and secured numerous other special favors for its prosperous constituency. This alliance began to weaken only in 1953, under mounting Congressional pressure, when Secretary of Agriculture Benson ordered the official divorce of the Extension Service and the Farm Bureau. However, attitudes had changed but little; agricultural college and Extension personnel still by and large regard themselves as servants of the "best" farmers as represented by the Farm Bureau, and the big commodity organizations like the National Cotton Council.

The relationship between the colleges, the Extension Service, and the Farm Bureau has been particularly cozy in California. Until 1938, the California Farm Bureau Federation had its offices behind the ornate facade of Hilgard Hall, right on the Berkeley Campus of the University of California. From there, the California Bureau moved to a building on the edge of campus, and when the University purchased this building in 1961, the Bureau moved to its present location in the elegant white six-story California Farm Bureau Federation Building a few blocks away down Telegraph Avenue.

Of course the Bureau's symbiotic relationship with the Extension Service and the university's agriculture department did not continue absolutely uncontested by the more "liberal" on campus. Indeed, one of the more colorful episodes of the Bureau's life on campus was the running battle between William Brownell, editor of the campus newspaper, the Daily Cal, and the Bureau's friends in the university administration.[21]

As described in the Farm Labor Subsidy section p , the California Farm Bureau and the state Chamber of Commerce had joined together in 1934 to create the Associated Farmers -- the Ku Klux Klan type vigilantes who led the strike-breaking efforts of the 1930's. While this front kept the Farm Bureau, the Extension Service, and the university from direct involvement, they actually bear substantial responsibility for these disgraceful activities.

In some counties, university-appointed Farm Bureau secretaries simultaneously led local branches of the Associated Farmers. One of the founders of the Associated Farmers and its first president, S. Parker Friselle, operated the university vineyard in Fresno. In 1937, the Extension Service took to organizing county conferences of "people who assertededly best represented the agricultural thought of the county".[22] Out of these conferences came remarkably uniform and viciously anti-labor resolutions, eg, repeal of the Wagner Act. Many of the conferences even endorsed the Associated Farmers by name. These resolutions the Extension Service duly transcribed and published as "educational" pamphlets, leading then state chairman of Immigration and Housing Carey McWilliams to charge publicly that the university's Agricultural Extension was being used by the Associated Farmers to "sabotage civil liberties, labor, and even the state administration's own legislative program".

On September of 1939, William Brownell, editor of the Daily Cal ran an editorial about these charges entitled aptly enough, "Explanation Wanted". A few days later, after some baulking, the Dean of the College of Agriculture, Claude B. Hutchinson, finally answered the charges. The recommendations had been drawn up, he said, by "representative farm leaders" (who presumably by sheer coincidence all adhered to the

Associated Farmers' line). "If the recommendations the farmers chose to make were designed to sabotage civil liberties, it is outside the jurisdiction of the Extension Service which published and distributed the reports."[23]

Meanwhile, university officials attempted to force Brownell to retract his editorial, in one instance even drafting a retraction for him. Instead, Brownell went on to investigate the matter further, publishing details of Extension conferences and lengthy extracts from Extension publications. Finally, he offered the university Extension personnel a whole editorial page in which to answer the charges. But the university officials back in those days knew how to handle such "student protest"; they completely ignored it.[24]

Academic "Experts"

After the Associated Farmers faded from the scene during World War II, the university made itself useful to big Farm Bureau type growers in quite another way. The best illustration is the story of university economists and the Bracero program, as exhaustively documented by the Drapers.

The story rightly begins in 1958, with Pat Brown's campaign for governor. As part of his platform, Brown had promised farm workers a state minimum wage, state collective bargaining, and the extension of unemployment insurance to farm workers. But in 1959, after an attempt to push through a minimum wage bill, Brown suddenly discovered -- and announced publicly -- that the growers had the strongest lobby in Sacramento. Therefore, Brown passed the responsibility for farm labor to the Senate Fact-Finding Committee on Labor and Welfare, chaired by

Senator Cobey of Fresno.

This committee began exhaustive hearings on farm labor in 1959, continuing through 1961. Not surprisingly, the University's Colleges of Agriculture supplied many of the star witnesses and considerable help in putting together the ensuing report: "California's Farm Labor Problems". Not surprisingly either then, the recommendations supported the grower's lobby.

For example, Dr. George Mehren, then Director of the Giannini Foundation of Agriculture testified before the committee that "The increases in distributive shares to labor have been at least as high as increases in labor productivity rates" -- implying that farm workers received what their labor was worth -- or "There is no compelling indication of exploitation of hired domestic agricultural labor anywhere in any agricultural industry for any protracted period".[25] Yet a professor of sociology testified precisely the opposite, that farm labor is "underprivileged, underpaid, improperly fed, ill-housed, poorly clothed, inadequately socially protected". A report prepared for Governor Brown in the same period by two non-agricultural university men reached the same conclusion.

Then, the introduction to the Committee's report gave particular prominence to the statement of another prominent agricultural economist from the Giannini Foundation, Professor Varden Fuller. Fuller, who had served on President Truman's Commission on Migratory Labor in 1950-51, testified:

> "The people have not become poor from working in agriculture; they have become agricultural workers because they were already poor. Thus, in the sense of providing an opportunity for those not accepted elsewhere, temporary farm work may be regarded as ameliorating poverty rather than causing it."[26]

As Professor Fuller told one of us this summer, he meant by this extraordinary statement that agricultural work essentially provides a "subsidy" to the rest of society by acting as a "dump" for otherwise unemployable people allowing society to avoid its responsibility to take care of them. Nevertheless, while Professor Fuller's argument may not have been entirely intended to justify doing nothing for farm labor, in fact the Cobey Committee used it for just this. The Committee recommended against a state minimum wage for agriculture, against unemployment insurance, and against collective bargaining for farm labor. The Committee did recommend a bill to make growers provide toilets and hand-washing facilities in the fields as their lack endangered public health -- but the Farm Bureau successfully killed even this limited measure.

The Cobey Committee made one other important recommendation: that the Bracero Program be continued indefinitely. This program, under which the government supplied growers on demand with cheap Mexican labor (see Labor Subsidy chapter, p.), was then under increasingly sharp attack in Congress which ultimately voted a "final" two-year extension of the program to 1963. Thus the massive Cobey Committee report gave important new ammunition to the farm lobby defenders of the program in their drive to extend further the "final" extension.

The most respectable defender of the Bracero Program at the time was none other than Dr. Eric Thor, a prominent agricultural economist with the Giannini Foundation of U.C. at Berkeley and the Extension Service. Dr. Thor repeatedly predicted absolute catastrophe for California agriculture should the Braceros go. An article about Thor in the August 1963 Western Fruit Grower, a leading glossy agricultural

magazine which adheres strictly to the Farm Bureau point of view, aptly describes Thor's line of argument. Thor predicted that termination of the Bracero Program would produce a vast unmanageable influx of poor hungry farm laborers. According to Western Fruit Grower:

> "If you cringe at the thought of more farm labor shanties, barefoot and hungry children, the squalor of dusty tent cities -- this is exactly what Thor wants you to do. He fully expects a migration that could result in conditions similar to the thirties . . ."[27]

As this horde swept in, farm wages would drop drastically.

Of course, the newspapers duly cringed, headlining predictions of a new "Grapes of Wrath" era. Few observed the inconsistency: if a severe shortage of domestic farm labor (despite massive unemployment) made the Bracero Program necessary, as the growers claimed, then where would this appaling influx come from? Thor even carried his perverse argument one step further, stating that "the Bracero Program had been a weapon used by unions to force higher farm wages"[28] and predicted that the end of the Bracero Program with the resulting influx of poor workers would actually hurt union organizing! "Hungry workers are hard to organize."

On the other side, Thor appealed to taxpayers, as quoted in Western Fruit Grower: "We had no education or family health problems with Braceros, and we will certainly feel the load if we must start supplying them suddenly".[29] This line of reasoning of course ommits mention of the burden to taxpayers of unemployed farm workers on welfare, or of the multimillion administrative costs of the Bracero Program. It also sounds like the mandate the growers gave Parker Frisselle of the Associated Farmers in the 1930's, when they sent him to Washington "to get us Mexicans and keep them out of our schools and our social problems"

(see Labor Subsidy, p.).

The arguments of Thor and others like him helped the Farm Bureau extract from Congress one more "final" extension of the Bracero Program to the end of 1964. Then, when the program finally expired, Thor's drastic predictions of course turned out to be 100% wrong. No hungry hordes invaded California; and according to a report of LabSec Wirtz, by 1968 domestic farm employment had risen 15.5% and wages 25.2%. Unionizing began promptly when Filipino grape pickers in the Coachella Valley successfully struck growers who offered them only $1.10 an hour when the Braceros had been paid $1.40.

Admittedly, Thor and his colleagues didn't abuse their academic freedom in thus whole-heatedly arguing on behalf of the big growers, even though their arguments proved completely specious. However, other episodes during Thor's last stand for the Bracero Program reek of abuses of academic freedom.

The first such episode is the "Case of the Seventeen Missing Pages". At the request of the Brown administration during the campaign for the continuation of the Bracero Program, Thor, his colleague Dr. John Mamer and a number of other Giannini economists and Extension Service personnel produced a massive report entitled "California Agricultural Labor Requirements and Adjustments". This report, which systematically rejected all possible alternatives to Braceros, appeared at just the right time in 1963 when newspapers all over the state were already frothing at the fount that BRACERO LOSS PERILS STATE'S BILLION-DOLLAR FARM INDUSTRY (LA Times August 16). Thus the Giannini Foundation's GLOOMY REPORT ON BRACERO PROBLEM (SF Chronicle September 29) gave impartial scholarly support to the self-interested moans of the Farm Bureau

Federation and its allies at just the crucial moment and probably helped significantly in gaining that extra one year final extension of the Bracero Program.[30]

The Giannini Report did however receive a challenge from an unexpected and unwelcome quarter: in late 1964, Fred H. Schmidt of the Institute of Industrial Relations at UCLA produced a report entitled After the Bracero. On the basis of 664 interviews with unemployed workers in the Los Angeles area, Schmidt concluded what union officials had said for decades, namely, that ample domestic labor would be available to replace the Braceros provided that "the jobs [are] made more rewarding to the worker".[31] To make farm work more rewarding, Schmidt suggested a modest increase in wages, improved conditions, the extension of unemployment insurance to farm workers and training under the Manpower Development and Training Act. He also warned that the continued importation of Mexican workers "is likely to reduce the incentives for the growers to develop and participate in programs to increase the employment of domestic workers".[32]

The growers raised a predictable outcry. J.J. Miller, head of the Southern California Agricultural Producers Labor Committee called the report a "blueprint for disaster for California agriculture". He continued: "If California farmers were forced to follow the recommendations ... large segments of agriculture in this state would be wiped out. The economic shock waves of such a diaster would knock out many affiliated industries". Finally, he charged that the Schmidt report "was released without consultation with responsible people in California agriculture. It was released in such a way that agriculture could not prepare its rebuttal for publication in the same issue as the report.[33]

As the Drapers aptly put it, "The innocent bystander may well wonder why a university study was expected to be submitted before publication to an industry which it criticized, and why its targets expected the right to a simultaneous rebuttal". Some fine sleuthing by the late Ruben Salazar of the LA Times uncovered the reason.

It turned out the original Giannini Report by Thor, et al, had included a seventeen page section which contained conclusions identical to those of the Schmidt report. This section had been deleted sometime after the report went to Governor Brown, but before it had been released to the public and to the Senate Fact-Finding Committee on Labor and Welfare. Presumably big growers had grown accustomed to a "review" of publications of the Giannini Foundation; hence their outrage at the unapproved Schmidt report.

The other case of university suppression of research after "consultation with responsible people in California agriculture" as documented by the Drapers occurred a few years earlier. A member of the university School of Public Health, Henry Anderson, had been conducting field work on Bracero health. In 1958, Anderson tactlessly told the American Friends Service Committee that the Bracero program was unjust and should be abolished. Farm Bureau officials, on learning of these "allegations", reportedly complained to Vice President of the university, Harry Wellman of Agricultural Sciences Division background, threatening to attack the university budget in the State Legislature.

As a result, Anderson was forced to stop interviews and write up the report immediately. On completing it in mid 1960, Anderson mimeographed 100 copies and sent them out for comment. An Advisory Committee of professors then met which agreed the study was too "controversial"

to be published. As Anderson told the Drapers, "The chairman of the committee was quite candid. He said he had no intention of going through any more pressure from the Farm Bureau, over an issue not of his choosing, and which he didn't consider that important". Anderson was required to put together a Bowdlerized version, and to recall and destroy the 100 copies he had mimeographed, saving only one copy for himself.

Five years later, Anderson obtained an interview with President Clark Kerr. According to Anderson, Kerr admitted to knowing of the case, and even had read the American Friends Service Committee report which started all the trouble. That such a noted defender of academic freedom as Clark Kerr knew of this outrageous case, yet (by the most charitable interpretation) dared not intervene, amply demonstrates the power of the Farm Bureau Federation and its allies over the university.[34]

Against this background of political involvement with the agri-business lobby, the university's research bias becomes easily comprehensible. Indeed, the bias extends from agricultural research to the very management of the university itself. Thus during the current lettuce boycott, as during the former grape boycott, the university at Berkeley has steadfastly maintained a "neutral" position by serving non-union lettuce in the cafeterias. As a result of student boycott, the cafeterias now run deeply in the red, but the university administration remains adamant.

According to one member of the Division of Agricultural Sciences, the heat is now on in agricultural research to drop everything else and concentrate on mechanization in hopes that some crops can be completely mechanized before the Union turns its attention to them. Even the old lettuce picker has been dusted off. This machine, invented some ten

years ago, proved so successful that it flopped. A few hundred machines, it turned out, could pick the entire U.S. lettuce crop -- too miniscule a number to provide a profit for agricultural machine companies.

It is true of course that a few breezes of change have whispered through the Division of Agricultural Sciences. A number of the younger men we talked to do not share and even criticize the spirit of "industry cooperation" that still pervades the orgainzation. Extension has begun to devote somewhat more attention to the needs of small farmers -- to the extreme disgruntlement of more traditional members. For example, one D.C. Alderman, Extension Pomologist at Davis complained in an article in Western Fruit Grower[35] to the effect that "Extension's role is changing in a way that may benefit the diligent commercial grower a lot less than it does the inefficient and often poor farmer". As he told a meeting of leading fruit, grape and nut growers, "Efforts to solve the problems of the 'disadvantaged' in the rural areas would do little or nothing to solve the problems confronting commercial producers such as yourselves". Obviously.

Even more heinous in Alderman's view is the new nutrition program operated by Extension. This program, with a national budget of 50 million, 2 1/2 million in California, trains 400 aides from low income areas to in turn teach their friends and neighbors how to eat better for less money. Curiously enough, although Extension works almost exclusively in rural areas, with the exception of a small program in Tulare County, the nutrition program is strictly inner city. According to Dr. Lawson, Assistant State Director of Extension, "Congress just wanted it that way". (Presumably to keep any aid from getting to farm workers.) But, in Dr. Lawson's view, the program has been a great

[illegible]

[illegible] Jack Hitt. [illegible] starvation [illegible] county [illegible] Mississippi, [illegible] this program [illegible] it goes along with the philosophy that the poor are not starving because they are poor, but because they are [illegible].

[illegible] to be hopeful signs, efforts like the following are more typical. On February 1[illegible], the Division of Agricultural Sciences sponsored a meeting in Sacramento headlined in the February 17th SF Chronicle as "An Attempt to Reassure the Public on Pesticides". According to the article, the meeting "was organized by representatives of the university, the Farm Bureau Federation, the chemical industry, the operators of agricultural aircraft and the State Departments of Health, Agriculture and Fish and Game".

"The meeting was designed to point out America's intimate dependence on chemical progress for nutrition and health, and to weigh the hazards of pesticides and fertilizers in a balance scale of cost and benefit.

"The experts marshalled an extraordinary array of facts and figures to support them:

"Pesticides, they said, have accounted for at least 20 per cent of the nation's increased farm output in the past 30 years, and if the chemicals were banned right now crop and livestock output would be slashed by one-third.

"Herbicides, like the controversial defoliants known as 2,4,5-T and 2,4-D, are essential elements of agricultural technology,

the experts maintained, and banning them completely would immediately cost American farmers nearly $300 million a year."

These facts and figures marshalled by "the experts" are indeed extraordinary: there is not a shred of evidence to back them up. The one-third drop in crop and livestock output is, according to a USDA economist, Velmar Davis, "a figure that has been kicking around the USDA for years. It's meaningless." No one has ever made such a calculation because the data is not available, however, the figure is certainly much too high. Likewise, 2,4,5-T and 2,4-D are not "essential", only a bit cheaper than alternatives.

In other words, in sponsoring this meeting, the University of California has lent a cloak of respectable academic expertise to what would otherwise have been a blantant exercise of agribusiness and chemical industry private relations.

The solution? Take agribusiness off the State welfare roles: make agriculture pay for its own research and public relations.

A footnote on the California Farm Bureau Federation. The Federation looks as healthy as ever. Its president, Allan Grant, is also president of the State Board of Agriculture and a member of the Board of Regents running the University. Nonetheless, according to observers in the University, the Federation has of late lost most of its teeth. Squabbles between producers of various commodities became so severe that the commodities finally went off on their own. Today the real power lies with such organizations as the California Canning Peach Association, Allied Grape Growers, Sunkist, Sunmaid, Sunsweet (prune juice), Diamond Walnuts, the California Almond Exchange, the Rice Growers Association, etc., etc. Propagandizing for all of them and in effect replacing the Farm Bureau Federation is the Council of California Growers, an association of the very large commercial growers. Nonetheless, the real power of agribusiness has if anything increased.

FOOTNOTES

1. Hal and Anne Draper, Dirt on California, Agribusiness, the University, p. 5.
2. Ibid, p. 6.
3. David Sekler, p. 14.
4. Ibid, p. 10.
5. Wall Street Journal, June 17, 1968, quoted in Dirt, p. 24.
6. Sekler, p. 15.
7. Ibid, p. 16.
8. Ibid, p. 20.
9. Dirt, p. 23.
10. Ibid, p. 26.
11. Cooperative with Industry, List #11, July 22, 1970, p. 37.
12. Ibid, p. 23.
13. Dirt, p. 7.
14. See The Decline of Agrarian Democracy, Grant McConnel, University of California Press, Berkeley & Los Angeles, 1959.
15. Ibid, p. 35.
16. Ibid, p. 46.
17. Ibid, p. 51.
18. Ibid, p. 52.
19. Ibid, p. 57.
20. Ibid, p. 53.
21. Dirt, p. 3.
22. Ibid, p. 3.
23. Daily Cal, September 25, quoted in Dirt, p. 4.
24. Dirt, p. 4.

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25. Dirt, pp. 11 - 12.
26. Ibid, p. 8.
27. Ibid, p. 13.
28. SF Chronicle, August 11, 1963, quoted in Dirt, p. 14.
29. Dirt, p. 13.
30. Ibid, pp. 14 - 15.
31. Fred H. Schmidt, After the Bracero, 1964, p. 28.
32. Dirt, p. 17.
33. J.J. Miller in the LA Times, October 26, 1964, quoted in Dirt, p. 17.
34. Dirt, p. 32.
35. Western Fruit Grower, April 1969, p. 13.

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EFFICIENCY AND AGRICULTURE

by

Michael Perelman

A cynic might even assert that the family farm is an institution which functions to entice farm families to supply batches of labor and capital at substandard rates of return in order to supply the general economy with agricultural products at bargain prices.

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Americans are much more willing to praise the small farmer than to help him; but small scale farming is not even praised; the farms we really admire are the large, capital intensive operations. Clifford Hardin reflects this basic attitude when he writes:

> Using a modern feeding system for broilers, one man can take care of 60,000 to 75,000 chickens. One man in a modern feedlot can now take care of 5,000 head of cattle. One man, with a mechanized system, can operate a dairy enterprise of 50 to 60 milk cows.
>
> Agriculture, in short, does an amazingly efficient job of producing food.[1]

Yes, if we measure efficiency by output per farm worker, then we must agree with Secretary Hardin's analysis; and in that case, we should get on with the job of clearing the land of the inefficient small farmer to make way for the large modern farms which are capable of using the newest technology.

On the other hand, we could ask ourselves why we should measure efficiency by output per manhour. After all, no man alive can really feed 75,000 chickens by himself. In reality he is aided by many other men who have made the cages and grown the feed. But we don't see these other men at the broiler factory; in fact, some of them might have never set foot on a farm. Yet they are farmers nonetheless, for without these men producing the capital and other inputs, the modern farm would wither away.

Since we cannot measure the physical contribution of these men, we use a different measure of efficiency; namely, profitability. Here again, the large, modern farms come out on top because they are very profitable; otherwise major corporations would not be investing in these farms. However this efficiency owes a great deal to their tax accountants and attorneys: Moreover, "high leverage and capital gains on the scale experienced over the past decade can convert a nominal rate of return on total

investment OF ONE OR TWO PERCENT into an effective rate of return on equity of eight to ten percent or higher."[2] These advantages give the corporate farmer an edge over the small farmer. Furthermore, the profits of the large farmer are due in large part to government subsidies. According to a study by the Legislative Reference Service, large farms with over $40,000 sales per farm would face greater financial difficulties if price supports were discontinued. In fact, had price supports been absent, expenses on the average would have exceeded receipts for those farms with over $40,000 sales.[3] So profit cannot be considered an accurate guide to efficiency in the farm sector.

Larger farmers have other advantages, over and above government policy. In the first place their buying power gives them leverage in the marketplace. They get cheaper inputs and lower interest;[4] however these advantages could be neutralized if small farmers pooled their buying power so that their weight would also be felt. A second advantage of the large farm stems from a sometimes difference between the goals of larger and small farmers. To see this you must understand that some large farming operations are very interested in land speculation. As Simon Askin, Tenneco's Executive Vice President for Agriculture and Land Development, says, "We consider land as an inventory, but we are all for growing things on it while we wait for a price appreciation for development. Agriculture pays the taxes plus a little."[5]

As more and more of these well off farm interests go into farming the price of land is bid up and the market for farm products becomes glutted: Thus the price of farm products falls or fails to keep up with the prices of other goods. But the land speculator doesn't mind. In fact, it is to his benefit at tax time to be in an industry with a low

rate of current earnings while his equity rises with rising land values.

On the other hand, the small farmer needs his income today to meet his current expenses. He can benefit from the rising land values only when he sells out and ceases to be a farmer.

Now we come to the heart of the paper in which we go into some economic, ecological and social reasons for the superiority of the small farm. Our arguement is grounded on one historical fact: that until the age of industrialisation, all societies had to work harder to feed themselves as their population grew; that is, a one percent increase in population meant a larger than one percent increase in the effort required to feed everyone. You can find a very nice documentation of this fact in Ester Boserup's The Conditions of Agricultural Growth.[6] We have reversed this trend with industrialisation only be means of harnessing the energy of fossil fuels. This stored up energy made it possible for the farmer to cut the soil with steel plows, to harvest with sophisticated machinery and then to take his produce to cities hundreds or even thousands of miles away.

The most dramatic form of mechanization was the tractor. As late as 1920, more than 20 million horsepower was provided by horses and mules. These animals had to be fed from the land.[7] With the adoption of the tractor, this land was freed to produce food for humans instead of horses and mules. A tractor feeds on oil. Not only was land freed by the tractor; labor was also freed because one man plowing with a tractor could do the work of several men plowing with a mule. The net effect of mechanization is shown in Table I.

TABLE I*

How Mechanical Power Replaces Human Power

YEAR	TRACTOR HORSEPOWER MILLIONS	MAN HOURS OF FARM WORK MILLIONS	COST OF OPERATING AND MAINTAINING FARM CAPITAL MILLION DOLLARS
1920	5	13,406	
1950	93	6,922	5,640
1960	154	4,590	8,310
1969	203	3,431	11,500

*Source: Changes in Farm Production and Efficiency, A summary Report, 1970, United States Department of Agriculture, Statistical Bulletin, No. 233, Washington, June, 1970.

The displaced workers left the farms to go to the cities where they produced inputs for agriculture as well as the goods and services which constituted our GNP. But as we produced more goods, we consumed more and more of our stored up energy. For instance, farmers use the average tractor 400 hours per year.[8] Since the average tractor is about 40 horsepower, we can estimate that each tractor represents about 16,000 horsepower hours of use.[9] Assuming that the average tractor consumes about .1 gallons of fuel per horsepower hour, then its use represents 1600 gallons of fuel per annum.[10] Since we have about 5 million tractors in the U.S., we can estimate that tractors alone consume about .8 billion gallons of fuel.[11] But tractors are only a portion of agricultures drain on our energy supplies.

To show what high levels of energy consumption mean for agriculture Fred Cottrell tried to compare the energy budgets of Japanese and American farming.[12] He found comparable statistics for two rice farms, one in Japan and the other in Arkansas. In Japan, an acre could be cultivated

and harvested with about 90 man-days which is equivalent to 90 horsepower[5] hours. On the Arkansas farm, more than 1,000 horsepower hours of energy were used just to power the tractor and truck. Moreover, the consumption of electrical energy exceeded 600 hp-hours. Cottrell did not even include the energy required to produce the tractors and equipment. In fact, some authors believe that the 'efficient' American grain farm consumes more than one calory of fossil fuel energy for each calory of food it produces.[13] If we are facing an energy crisis then this type of farming is absolutely irrational.

Of course we did not feel any pinch; energy was still cheap and abundent. Still we could count upon reserviors of energy from Arabia, Venezuela and the other corners of the world. Moreover, the prices of other raw materials fell making mechanization still cheaper, at the same time that a rising standard of living made men expect more for an hours worth of work. Mechanization became economically irresistable, but what was irresistable in the past might be unfeasable in the future. More and more people are populating this planet and most of them are demanding some of the comforts which we Americans enjoy. This increased competition for a diminishing or constant supply of raw materials will force up the prices in the future. (Besides part of the Cheapness of some of our raw materials rests on our military and economic influence over the weak nations which export them; that is, some of their cost is hidden in our military and foreign aid budgets.) What is most crucial is that the type of technology which is profitable with falling raw material prices is not the type which will be most profitable when these prices increase.

We are also facing a population explosion which means that we do not have to worry about economizing on labor; we will have a labor surplus economy. In fact, our nation already has a labor surplus economy so long

as millions of men cannot find work. Yet we call our farm sector efficient while it brags about how few men it employs. We need to think about labor absorbing agriculture.

Of course, we could use much more labor to care for our natural resources. But care is unnatural to large scale farms; it is expensive and uneconomical. It is cheaper to pollute our water with pesticides and nitrates; it is cheaper to dessicate our topsiol. As a result our natural resources are wasted, and the quality of our food suffers. Moreover, our yields are not very high even though we have some of the finest agricultural soils in the world. For instance, Japaneese peasants are able to harvest 1,100 more kilograms per hectare than an American farmer. Yet the Japaneese have a considerable worse climate and much poorer soil. Moreover, five percent of the Japanese rice land is not irrigated.[14]

In the Orient, however, care of the land is a fine art. Although much of their land is marginal, they have been able to farm it with yields comparable or higher than our own. Yet this land has been farmed for forty centuries.

One example might help to explain how the Chineese, for instance, have been able to maintain their resources. In the part of the United States where I live we clear our lands of rice stubble by burning the fields: In China, rice stubble was used for all sorts of purposes, but it was also burnt as a cooking fuel. The heat from the stove was drawn off through pipes and led to large black blocks of subsoil which absorbed the heat. These blocks made nice, warm beds for the Chineese. Sooner or later, the beds began to crumble; the heat and the nutrients from the smoke had opened the blocks up to microbial life. So the crumbling beds were returned to the fields where they made excellant fertilizer. Everything was used and nothing was wasted. According to some, Chairman Mao

is maintaining this ethic in China today.[15]

However we have no such ethic, and because we do not care for our natural resources, neither our yields nor the quality of our food is very high. The history of our corn crop is instructive here;

> American soils have been almost legendary for their fertility. One commentator was only slightly exaggerating when he said, that our soils are so rich that "if you tickle them with a hoe, they laugh with a harvest".[16] We were so mindless about protecting this fertility that we have spent much more effort worrying about farm soils themselves. Part of our carelessness was understandable; we seemed to have a boundless supply of land and so long as there was new land to put under cultivation, the effects of soil depletion would be less striking. For instance, between 1870 and 1900 corn yields remained constant, but about two-thirds of the increased acreage was located in eight cornbelt states where the mean yield was twenty percent higher than the United States average. Then between 1902 and 1925, yields were able to increase slightly, but this increase in yield was made possible because less fertile land, like that found in Texas and Oklahoma, was taken out of production. Soon after the beginning of the 1920's yields began to fall and although acreage remained constant until the early 1930's, production began a downward trend. Then from the 1937 low, yields rose to a 74% above the ninty year mean for the period 1870 to 1960. One part of the explanation is that production was discontinued on more than 17% of the 1937 acreage in the relatively low yielding southern states. This land was probably taken out of production because the soil was too depleted to continue further cultivation of the corn. Another reason for

the rising yields of the late 1930's was the introduction of high yielding hybrid corn.[17] The more extensive roots system and aggressive feeding characteristics of the hybrids, enabled them when first introduced, to extract fertility which was inaccessible to open polenated varities. That is, hybrid corn sped up the rate of soil depletion. But there was another reason why the hybrid corn produced more. The increased yields were bought at a cost of lower protein content.[18] The agronomists refer to what they call the inverse nitrogen law which says that the more nitrogen we find in a crop the less we can expect its yield to be. And similarly the higher the yield the less percentage of nitrogen we can expect to find. Nitrogen is found in all proteins and may be taken a rough proxy for the protein level of the corn. For example, low yielding Indian corn has shown a protein content of from 12 to 15%; over the years we selected those seeds which produced more until the protein content fell substantially. But even before the advent of hybrid corn it was still possible to raise hogs on an exclusive diet of corn.[19] Then in between 1937 and 1947 the average protein content of corn fell by more than 10%.[20] At first livestockmen complained about the value of hybrid corn as a feed,[21] but we don't hear much about that anymore, because feed today is supplemented with heavy doses of fish protein. Most of this comes from fish caught off the shore of Peru where the people suffer from protein deprevation. The United States imports enough fish protein to wipe out one-half of the protein deficiency in the entire continent of South America.[22] That is, our corn crop required foreign protein subsidies to make it into a sufficiently nutritious animal feed.

Perhaps the most important property of hybrid corn is its regularity; because all the hybrid corn plants are just about the same height on the stalk, mechanical harvesting becomes a simple matter. Thus hybrid corn helped to speed up the mechanization of agriculture. And perhaps most of all, hybrid corn demonstrated the productivity of 'efficient' agrigulture.

However our technology weakens our crops and makes them more susceptable to disease; witness the recent Southern Corn Leaf Blight Epidemic. The chemicals we use to aid in farming are dangerous to many different life forms; birds, pets and even humans. Yet all this is considered efficient.

Many people grant that the small farm has ecological as well as social advantages over the factory farm, but then they ask if the small farm could feed America. The answer is that it could and would. In fact, small farms have higher yields than larger farms. The yields reflect in part, the more intensive care which the small farmer gives his land. Moreover, it is logical that we would produce more food by putting more people to work on the land.

But then would people want to return to the land? Young people today are giving us the answer to that question when they do go back to the lands and farm communally. They are fed up with the city; with its pace and with its tensions and with its intolerance.

But what about our standard of living? The true measure of our standard of living is the happiness of the people and judged by this standard America appears to be a poor nation. A return to the land might mean a return to sanity.

I am not saying that everybody or everyone must take up a hoe at

once. Not at all. But access to the land is imperitive. A first step would be to end the government policies which encourage large scale farming. End the tax and subsidy advantages to large scale farms. Next we must shift our support to those farmers whose technology is more in harmony with nature. End the wasteful consumption of our natural wealth, raw materials and people. Guarantee that men who actually work the land get a decent living. After all the labor cost of our food is only a small fraction of our total food cost.

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UNFAIR COMPETITION IN AGRICULTURE

We can read in the Agricultural Act of 1961 that "It is hearby declared to be the policy of Congress to:

". . .Recognize the importance of the family farm as an efficient unit of production and as an economic base for towns and cities in rural areas and encourage, promote, and strengthen this form of farm enterprise."[1]

In spite of the rhetoric about the family farm, our society is geared to grind up the family farm. In this paper we shall examine some of the mechanisms which contribute to this process.

We shall begin with the tax structure of our economy. In 1963 Secretary of the Treasury told the House Ways and Means Committee that tax farmers "create unfair competition for farmers who may be competitors and who do not pay costs and expenses out of tax dollars but who must make an economic profit in order to carry on their farming activities."[2] In the same vein, Orville Freeman said when he was Secretary of Agriculture that "there could be real trouble if (the conglomerates) move into agriculture . . .They already have contributed to the building up of land values. They can go in and farm and write off their losses as a tax deduction on a very profitable operation elsewhere. When this happens, dangerously unfair competition takes place."[3]

A second reason for corporations entering into agriculture is real estate speculation. Land will, in all probability, continue to escalate in value. Corporations know this and they also know that they can invest in agriculture as a form of land speculation; so long as appreciable cap-

ital gains can be made from the sale of land, the corporation can accept a low rate of return on its agricultural activities per se.

Here is what an agricultural economist with the Federal Reserve Bank of Kansas had to say on the subject:[4]

> Past rates of appreciation on farm land and rural real essate have been impressive. Although there is no assurance of continued increase in land prices, acquisition of farm land remains an attractive inflationary hedge for firms with adequate liquidity. Because of other considerations such as rapid transportation, urban sprawl, population growth, and expanding recreation needs, land may be acquiring a renewed investment appeal.*

The effect of land speculation in agriculture is very dangerous to the small family farm.

As the same agricultural economist said: "A study of the rates of return on farmers' equities in California. . .suggests that returns are low and apparently decreasing. Yet farmers (including corporation farmers) continue to invest their savings in agriculture."[5]

Table I shows that Net Farm Income for U.S. farmers has barely risen between 1949 and 1968; for California's farmers Total Net Farm Income has risen during the same period, but this rise is not enough to compensate for the inflation which has eroded the purchasing power of this income. In short, farmers have lost ground income-wise. Table II gives the other side of the balance sheet. This table shows the rapid rise in the average value of an acre of agricultural land. These values have more or less tripled during the period in question. Table III shows the average value of an acre of irrigated land used for orchards and groves in California and in the San Joaquin Valley. While the values of such land for the state as a whole have gone up, this rise has not been nearly so spectacular as the rapid increase in the values in the San Joaquin Valley.

To understand the importance of the potential gains to the farmer

TABLE I

TOTAL NET FARM INCOME
MILLIONS OF DOLLARS

Year	California	U. S.
1949	735	12,780
1950	846	13,673
1951	1,084	15,987
1952	1,100	15,051
1953	974	13,088
1954	941	12,503
1955	1,007	11,464
1956	1,072	11,444
1957	968	11,355
1958	963	13,500
1959	1,048	11,454
1960	971	12,079
1961	919	12,987
1962	1,010	13,215
1963	913	13,206
1964	1,073	12,266
1965	984	14,987
1966	1,058	16,253
1967	970	14,735
1968	1,157	14,675

Source:

Farm Income--State Estimates, 1949-1968, USDA, ERS, August 1969.

TABLE II

REAL ESTATE VALUES:
U.S. AND CALIFORNIA

Year	California	U.S.
1950	58	65
1960	109	106
1965	160	139
1969	186	179
	(1957-1959 = 100)	

Source:

Farm Real Estate Market Developments, 1965-March 1969, U.S.D.A., E.R.S., Appendix, p. 6.

TABLE III

AVERAGE VALUE OF AN ACRE OF IRRIGATED LAND USED
FOR ORCHARDS AND GROVES IN CALIFORNIA
AND THE SAN JOAQUIN VALLEY

Year	San Joaquin Valley	California
1965	1230	2160
1966	1832	3103
1967	1875	2850
1968	1775	2800
1969	1900	2850

Source:

California Agriculture 1969: A Report on California's Principal Crop and Livestock Commodities, California Crop and Livestock Reporting Service, Sacramento, California, May 1970.

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as a real estate speculator we must understand that ". . .the net capital[5] gains on California farm real estate would have totaled about $12.3 billion between 1950 and 1966 had farmers sold out at values used by the USDA in computing the January 1, 1966 Balance Sheet for Agriculture. This figure is net of an estimated $1.4 billion invested by farmers in land improvement and irrigation development.

"During this same period net farm income, which varied from a low of $846 million in 1950 to a high of $1.1 billion in 1952, totaled only $15.8 billion for the 16-year period."[6]

An example might help us to understand what all of this means to the small family farmer. We saw that the tax laws encourage wealthy individuals and corporations to buy farms. Furthermore the rapid build up of land values encourages investment in farming as a form of land speculation. As these investors buy up the farm land, they confirm the correctness of the judgement of the speculator and thus add fuel to the fire. The speculator-farmer and the tax dodge-farmer can and often do produce crops, but they do not depend on the revenue from these crops as the sole source of support for their families. Just as an urban speculator can call a parcel of land a parking lot. As long as he gets enough cars to pay more than the wages of an attendant, he profits from the parking lot business. But imagine another parking lot owner down the street, one who intended to stay in this business for ever. He would expect his lot to support his family. If it could not, he would have to sell out. Such a parking lot owner would suffer if so many speculators called their land parking lots, that the price of parking would be driven way down. The reduction of income might be sufficient to drive him out of business. Only those with sufficient resources so that they really don't need the revenue from their parking lots for their day to day existance would be able to survive.

At the same time that speculators and tax-dodge farmers drive up the price of land, they depress the amount of money a farmer earns from his crops because they flood the market with more food than the forces of supply and demand would call for under a free market system.

In the first place, the low returns to ordinary farmers means that the price system is signaling that too many resources are devoted to agriculture. Yet, as we have shown, large scale farms are ignoring these signals and investing heavily in agriculture contrary to the normal logic of the market place.

Secondly, large corporations have the political clout to move the government to open up new lands to agriculture through large scale reclamation projects, especially in the arid West, where these corporations own large tracts of land. These lands, when irrigated by even very expensive water, can turn a handsome profit by growing high priced crops like grapes and tree crops.

Because the total acreage devoted to speciality crops like grapes and tree crops is so small, what might seem to be an insignificant increaae in acreage can glut the market. One economist, James Bonnen, who studied the effects of federal reclamation projects concluded that "increased production on reclamation-served land . . . has reduced non-reclamation farmers' income."[7] A recent study of the effect expected from the San Jauquin West Side Development studied several crops and concurred with Bonnen. According to this study, the project will depress the price of deciduous fruits from 5 to 7%, almonds from 4 to 8%, grapes from 9 to 17%, cantalopes from 7 to 17%, other vegetables from 4% to 7% and early spring potatoes from 42 to 80%.[8]

Who is going into these specialty crops? Tenneco Oil has 3,800 acres of grapes; 1850 acres of almonds; 1000 acres of citrus; and

almost 900 acres of peaches and plums.[9] Kaiser Aluminum expects to be the world's largest producer of walnuts.[10]

In short, the effect of the large corporate farm has been to depress the price of current production and to increase the price of land. We can, if we want, view these capital gains on land as a substitute for current savings and investment; but, on the other hand, the family farmer doesn't have much choice about this saving. And worse yet, the small family farmer often has difficulty in transferring this saving (i.e., real estate value) into cash by borrowing. So when the need for quick cash comes, he can only raise money by selling his farm. Listen to what the President of John Deere & Co. has to say about the availability of credit to the small farmer.[11]

> To us credit is a sales tool. We provide it because we must (because banks do not)... The paper we accept from dealers carries higher rates than the banks charge forsuch paper and our rates are as low as any in the industry. Even so the amount of retail paper our company had on its hands last October 31 (1957), the end of our fiscal year, approximated $100 million, 200% more than three years ago. Surely the limited availability of credit from other lower cost sources must be a factor in the situation.
>
> We do not attract this business by taking excessive risks. Our credit standards have been high... (and) our losses have been minor.

The large farmer gets a break on other inputs besides credit. Table IV shows the differences between what large and small farmers pay. Still more important than the volume discounts available to the corporations are the benefits of market manipulation. As a corporation like Tenneco goes into the almond canning business, it can use its leverage from its large production of almonds to force down almond prices. The losses to Tenneco-as-a-farmer are more than compensated by the gains to Tenneco-as-a-buyer-of-almonds.

Corporations which sell to agriculture also benefit from farming.

TABLE IV

RELATIONSHIP BETWEEN FARM SIZE AND COST OF CAPITAL AND OTHER PURCHASED INPUTS

Farm Size (acres)	Interest on Operating Capital (6% norm)	Volume Discounts: Fertilizers	Volume Discounts: Insecticides	Volume Discounts: Crop Dusting & Areal Spraying	Total difference from Base Cost per Acre.
80	6.88%	0%	0%	0%	$ 0.56
160	6.52%	4%	0%	0%	-.25
320	6.47%	4%	5%	0%	-.53
640	6.47%	4%	5%	12.5%	-1.27
1,280	6.15%	10%	8.5%	17.5%	-3.96
3,200	5.90%	10%	14%*	25%	-6.62

*Denotes only one observation behind the data.

Source: J. E. Faris, and D. L. Armstrong, Economies Associated with Farm Size, Kern County Cash Crop Farms, Giannini Foundation Research Report No. 269, 1963, pp. 73-96.

In an article in Doanes' Agricultural Report, entitled "Big Corporations Invest More in Agriculture", Peter Grace, President of W.R. Grace, is quoted as saying in 1967: [12]

> ...U.S. nitrogen plants are operating at only 78% of operating capacity in 1968.

The article continues by noting that:[13]

> Most firms supplying petroleum products and ag chemicals are being forced by the competition to offer credit (like John Deere & Co.). They would prefer not to do this, especially with today's high cost of money...
>
> During the struggle for control of Kern County Land Company last summer, more than one fertilizer firm was interested in acquisition, from the standpoint of guarenteeing an outlet for a large amount of their products on the company's huge irrigated crop acreage.

The article concludes that "it is our opinion that corporate farming will increase. It's a matter of how fast."

The last statement does seem correct. Corporations are taking over agriculture. Some farmers will survive, but they will be the farmers who are willing and able to grow to a size large enough so that they can play the same game as the corporate farmers.

Rudolph A. Peterson, ex-President of the Bank of America, says that based on facts and trends "what is needed is a program which will enable the small and uneconomic farmer- the one who is unwilling or unable to bring his farm to the commercial level by expansion or merger-to take his land out of production with dignity".[14] A spokesman for Gates Rubber Corporation was a little more blunt: "The economists say that forty percent of the people in agriculture are going to have to leave the farms eventually-we're just helping some of these to make the change".[15]

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*A further reason for conglomerates to invest in agriculture has to do with their financial machinations. "Most agribusiness companies don't sell at near the P/E (price to earnings ratio) of the non-agricultural companies. In other words, a non-agricultural firm earning $100,000 per year might be expected to sell for around $2 million. On the other hand, an agricultural firm earning the same amount might be expected to sell for $700,000 to $1 million, or at a much more favorable P/E ratio. What this means is that the company acquiring the agribusiness firm gets an immediate improvement in its share earnings." (See Henry Fiola, "Interview with Walter Minger, Vice President, National Division, Bank of America, S.F.: Corporate Acquisitions: What they are all about and why they take place", Western Fruit Grower, July 1969, p. 18.)

FOOTNOTES

1. From a speech by ~~Senator Lee Metcalf~~ Angus McDonald before the House Ways and Means Committee, Tax Reform, 1969, March 10, 1969, p. 2013.

1a. Supra 1. Senator Lee Metcalf, p. 2070.

12. Quoted in Robert Dietsch, "The Merger Boom, Who Owns What?", New Republic, February 22, 1969, p. 15.

3. Gene L. Swakhamer, "The Growth of Corporate Farming," in Monthly Review of the Kansas City Federal Reserve Bank, May 1968, p. 15.

4. Ibid.

5. Franklin J. Reiss, "Is $900 per Acre too Much for Farmland?" Illinois Agricultural Economics, July 1968, p. 23.

6. John A. Hopkin, Vice-President Bank of America N.T. & S. A., "Some Implications of Long-Term Outlook of California Agriculture on Capital Requirements," delivered to the Agricultural Economists of the Federal Reserve Banks, May 24, 1967, p. 17.

7. James Bonner, "The Absence of Knowledge of Distributional Impacts: An Obstical to Effective Public Program Analysis and Decisions," in Analysis and Evaluation of Public Expenditure: The PPB System, Joint Economic Committee, p. 435.

8. Gerald W. Dean and Gorden A. King, Projections of California Agriculture to 1980 and 2000: Potential Impact of San Joaquin Valley West Side Development," p. 120.

9. "Personnel: One of the Basics at KCL," Western Fruit Grower, October 1969, p. 15.

10. "Kaiser Plan for Walnut Production," Western Fruit Grower, August 1969, p. 5.

11. Wm. A. Hewitt, from speech in Board of Governors, Federal Reserve System, Financing Small Business, U. S. Government Printing Office, 1958, p. 364.

12. "Big Corporations Invest More in Agriculture," Doane's Agricultural Report, January 1968.

13. "Big Corporations Invest More in Agriculture," oane's Agricultural Report, January 1968.

14. "Farm Policy Question," in Agri Finance, Jan/Feb. 1969, . 42.

15. Said to the Select Committee on Small Business of the nited States Senate, Subcommittee on Monopoly in hearings eld in Omaha, Nebraska, May 20, 1968, p. 11.

ORIGINS AND GROWTH OF MIGRATORY SEASONAL LABOR IN AGRICULTURE

by

Paul S. Taylor

Great bales of ticks and bedding; old trunks, boxes, and barrels of clothing; bags of stale bread, macaroni, and peas; clanging bundles of cooking utensils; occasionally a stove; very often a few baby carriages, a huddle of children and confused parents, await the great hay wagons that drive up and carry them off by the wagon-load--luggage, baby carriages, and all--to their four-weeks' quarters on the berry farm.

--United States Immigration Commission, 1910.

In the harvesting of most truck crops and all fruit crops a large amount of hand labor still is necessary. To meet this need we have thousands of itinerant harvesting and packing crews in the fruit districts picking the fruit from the trees and performing every operation in the packing house, in the vegetable districts selecting and picking cantaloupes, or tomatoes, or cutting the properly matured heads of lettuce, cauliflower, or cabbage. Mass production has thus brought about what may be called the mechanization of the human element in the industry. The harvesting gangs are called in when wanted just as the tractor and gang plow are brought out of the sheds when needed. These waves of itinerant labor ebb and flow with the seasons. Almost every district of important specialized commercial production counts upon them as it counts upon the succession of the seasons.

--Wells A. Sherman, chief marketing specialist of U.S. Bureau of Agricultural Economics, 1929.

For thousands of years nomadism has been a way of life for whole peoples. Our cultural heritage has been enriched by its traditions, for there is something deeper than glamour in the simple life of roving peoples. Even today tribes of Asia follow grass rhythmically like their

ancestors. Folding their tents and driving their flocks and herds, they move en masse, keeping close to the basis of sustenance as its locations shift periodically through the seasons. Nomads have ever remained aloof from tillers of the soil, maintaining their own culture, and resisting settlement.

Migratory farm labor also moves restlessly and lives a simple life with ways of its own, different from that of the settled folk among whom it moves; but beyond this it shares little of the tradition of the nomads. Migratory labor in its most fully developed forms becomes a proletarian class, not a people with a separate developed culture. It is forced to till the soil for others. It lives in material poverty. Largely indispensable, nevertheless it is commonly exploited and substandard. It slips through stable and often rich communities, of which it is never an accepted part. It offers a breeding ground of social unrest. It migrates reluctantly, seeking a foothold on the land which it seldom gains. It lends itself readily to the development of a form of agriculture which is not a way of life, but an industry. Thus it becomes an unwitting instrument in the breakdown of the traditional American ideal of the family farm.

The roots of migratory labor lie deep in the processes of nature. In the rhythms of their growth, plants require more human care at one season than they do at another. But more even than in the natural processes of plant growth, the roots of the system of migratory labor spring from the decisions of men. To "grow a crop" is to devote a field to a single species of plant so as to obtain uniform produce. In this way the critical seasons when extra labor is required to plant, to cultivate, and to gather the harvest from that field are synchronized as well. If, within a locality, the fields which are planted to single crop or to crops with common seasonal rhythms become numerous, then the rhythms of seasonal labor are greatly amplified. When specialization of plantings reaches the point where it creates seasonal needs for more hands than the community can supply, then additional hands are invited to emigrate from without. Migratory labor is but the natural extension of seasonal labor drawn originally from within the locality.

The success or failure of the efforts of farmers to specialize, depends upon whether or not sufficient laborers can be persuaded to move in for the season. As early as 1900 the United States Census warned that inability to obtain sufficient seasonal laborers places a limit upon the economy of production of some vegetable crops. "At a distance from centers of population this transient labor is hard to secure, and even fancy wages sometimes fail to attract a sufficient supply," it said. "Under these circumstances a large number of laborers must often be kept the year round, at a proportionately increased expense."[1] It is for the very purpose of avoiding such an overhead cost of employing laborers steadily that growers customarily are ready to go to whatever lengths appear to be necessary to recruit migrant workers.

In the perspective of American history, these processes by which patterns of migrant labor are formed, unfolded as in slow-motion. Demand for extra laborers to assist farmers at critical seasons appeared first in the earliest settlements of New England. Temporary requirements of this nature were met sometimes in one way, sometimes in another--by the help of those members of the family who did not participate in field work at other times, by an exchange of labor between neighboring farmers, by the assistance of nearby settlers from small or undeveloped farms of their own, and by drafts upon nearby townsfolk. These drafts were reinforced, when the colonists deemed it necessary to assure sufficient additional laborers to bring in the crops, by the compulsions of law.

From simple seventeenth century beginnings such as these, more variegated patterns were developed to meet the regularly recurrent labor emergencies of farmers. At the end of the eighteenth and the beginning of the nineteenth centuries, the growth of towns and the improvements of transportation were beginning to expand the market and thereby to invite farmers to raise surplus crops beyond their own needs and to specialize. In the manner already described, specialization in a crop or two increased the required number of seasonal laborers until the insufficiency of resident laborers compelled farmers to attract others from whatever distance necessary to obtain them, and so finally to develop a migratory labor pattern.

During the past generations, the emergence of a migratory labor pattern in any community was usually slow; it unfolded only gradually following after a pattern of local seasonal labor. Under conditions of advanced mechanization, however, it is not uncommon to create a pattern of migratory labor--full-blown in the course of a single season, in communities that never had it before--by deciding to plant a specialized crop not previously grown.

The ultimate stage in development of migratory labor is reached when specialization becomes so general that men and families devote themselves wholly to serving its needs wherever they may arise. Thus the specialization in crops begun by farm operators finally comes to characterize even the laborers who specialize in performing the work. By the end of the nineteenth and early twentieth centuries, specialization in fruit and vegetable crops was beginning to induce laborers to specialize in work migrations patterned by the seasonal employments in one area after another offered successively by one crop after another.

Hay was probably the first American crop to produce regularly recurring seasonal migration of laborers. "For farmers close to markets, hay became a speciality," reminisced a speaker on early history before the Essex County, Massachusetts, Agricultural Society. "It is the money crop on which many farmers rely principally for a cash return to meet the outgoes of the season's work." In support of an increasing production of live stock, hay fields were made larger and larger until local

harvesters no longer were sufficiently numerous. "There are many disadvantages incident to the haycrop, especially when it forms a large proportion of the produce of the farm," continued the speaker. "It is bulky, and requires a large force to make it; the time for harvesting it in proper order is short, making it difficult to procure sufficient labor at the right moment to secure it in good condition."[2]

When these words were spoken in 1854, farmers in New England and New York already had been facing the problem for a generation, and had solved it. By the first or second decades of the nineteenth century French Canadians were crossing the border regularly in summer to help with haying. A letter published in the *New England Farmer* described in retrospect the prevalence of this seasonal influx which had begun decades earlier. "The Lower Canadian, in many places, leaves his home regularly every season, works for farmers in Vermont and New York during the haying season, and returns in time to secure his own small crops," it said.[3] Nearly twenty years later the *Genesee Farmer* of 1856 carried a paragraph of reminiscences about the same migration:

> These now comparatively wealthy farmers relate their early toils and privations with the greatest satisfaction. For years they struggled in the forest, deprived of all the luxuries, and many of the necessaries of life. Their only means of raising a few dollars to pay taxes or interest on their land, was to leave their farms and go into the States, or the more cleared parts of Canada, and working during the harvest, leaving their wives and children to take care of their own small crops.[4]

The incentive for farmers to enlarge their hay fields soon reached a limit, not for inability to attract a sufficient number of seasonal hands, but rather because hay could not meet the requirements of economical transportation to distant markets. Hay was not like corn, which could be distilled into whisky and carried overland to seaboard cities or floated down the Mississippi to New Orleans, nor was it like wheat, whose value was concentrated in small kernels which could be transported cheaply to the ends of the earth. The value of hay was in the entire plant which was bulky, and therefore costly to move far. So the enlarging hay fields soon became big enough to provide for farm uses and for feeding all livestock in the vicinity.

Demand for help from the outside for haying was persistent, even though it failed greatly to expand. Even the adoption of mechanical mowers to replace hand mowers who swung the scythe did not reduce it enough to end the seasonal migration, for in haying much hand work remained to be done, and the drain of farm boys to the West and to cities was removing many from the local supply of laborers. As the twentieth century opened, the original seasonal influx of French-Canadians to "the central and other counties" of Maine "for the hay harvest" was still noteworthy.[5]

The system of agricultural enterprise represented by the farm, as distinguished from the plantation, is based upon family labor, with hired help as auxiliary only, not as the main reliance. Consequently, any division of interest among those engaged in the enterprise is slow to arise, and is adjusted easily. When it appears, its customary aspect has been that of a family difference of opinion, not that of a labor dispute. A dissatisfied son simply has left home, or a discontented hired man has changed farmers the next season, or has gone elsewhere. But when numerous hands have been employed for a brief season, whether these were migratory or not, division of interests has appeared more readily and has stood out more clearly. The participants became aware of frictions and of cleavages beyond the personal. Once the sources of seasonal help were no longer local, the personal ties between farmer and harvest laborer had disappeared.

Seasonal laborers drawn from the vicinity were often other farmers and their sons, or nearby townsfolk, all members of the same community. But those recruited at a distance were simply laborers for wages; the bond between farmer and laborer had become cash, and little else. As early as 1829 farmers on Long Island looked hopefully to unemployment in cities as a creator of an available source of harvest labor. Anticipating "a want of laboring men to gather in the approaching abundant harvest," the *Long Island Star* noted that "As the cities and large towns are now complaining of dull times, it is believed that there are many men who might help this dullness by a little well-timed labor in the field."[6] This simple item, by its tone even more than its facts, signals the changing attitude. One did not ask of the unemployed of the cities that they come to the aid of their farmer-neighbors needing help; nor was the offer of wages for farm work made in any neighborly spirit of helping the unemployed out of their distress. The harassment of unemployment was simply a fact, to be used as a spur for whatever advantage could be wrung from it.

Among the occasions for friction on farms, temporary harvest employment stands conspicuous. Irritation, dispute over wages, and the jockeying for advantage implied in the early item from the *Long Island Star* became more common. Thus the *Rural New Yorker* noted in 1857 that "A frequent, and we might add, universal complaint among farmers during 'haying and harvesting' is the scarcity of laborers and the exorbitant prices demanded by them 'for services rendered.'"[7] Next year the *Genesee Farmer* reported attitudes of conflict at harvest which are familiar today. A correspondent wrote:

> I once asked an astute farmer, who was cutting a very large meadow of heavy grass on a Buffalo Creek bottom if he found a machine profitable, expecting an affirmative reply, as the machine did perfect work on that stoneless alluvial flat, but his reply was "no, if we could get such help as we once got; but," explained the farmer,

"there is no dependence on men now, for when you bargain with them and think you have them fast, you have to run after them and hire them over again at higher wages, and [they] don't work as many hours or as well as they used to at lower wages. But with my machine," said he, "I am independent of the rascally mowers, and common foreign help is plenty and cheap!"[8]

Likewise, the *New York Evening Post* of 1866 reflected the rise of a divided interest between farmer and seasonal hand which each was quick to sense, when, in urging farmers to use mowing machines and horse-rakes it gave the fact that they would harvest "without 'groaning'" as added incentive.[9]

Coincident with the appearance of friction between farmers and harvest help, friction arose also between farmers over which among them were to obtain help when the supply of hands was limited. When the *New England Farmer* of 1831 protested drunkenness among harvest hands, it complained that competition among farmers at harvest time was the cause. It said:

> Too many of the laboring part of the community are, at this season of the year, more like drunken savages than members of a civilized community. This evil does not spring either from benevolence or hospitality in their employers. Avarice seems to have been the first moving cause of this enormity. In direct opposition to the laws of God, and the reason of man, this contemptible selfish principle, *induced many to outbid their neighbors by a more plentiful supply of ardent spirits.*

The remedy, advised the editor, was to make payment in money "in lieu of whiskey."[10] But as years went on, the advice of farmers to each other on this point--not always followed, to be sure--was to be drafted in terms less liberal to the hands, namely, by offering them neither more whiskey nor more wages, i.e. for farmers to stand together as employers, and not to compete at all.

Besides hay, other nineteenth century crops were beginning here and there to create occasions that required laborers to move about for a season's work. In 1847, the *Cultivator* noted that the harvesting of broom corn and manufacture of brooms on a 300-acre farm near Schenectady were producing a seasonal movement of 80 to 100 workers, male and female, "mostly Germans, who came here with their families during the broom corn harvest and leave when this is over."[11] According to the *Country Gentleman,* the broom corn harvest was producing a similar gathering of women and boys in Illinois as early as 1870.[12]

Growing of hops had the same effect. In eastern hop yards it was the custom to assemble women and boys for the picking. As early as 1853 the *Country Gentleman* carried a description of early gatherings of

harvesters from the vicinity which were social in nature, as well as for purposes of rendering labor for hire.

> The time having arrived, and all hands being engaged for weeks or perhaps a year before, a merry time to all but the poor hop-grower and his family, now begins. One might suppose it would be difficult to obtain the necessary help at all times, and especially as all want it at the same time, in districts where so many hops are grown as in many parts of Otsego. But there is no lack of assistance in hop time (as it is familiarly called). I have often heard the remark, and experienced the truth of it myself, that forty girls could more easily be obtained to work in the yard, than one in the kitchen, or to nurse a poor sick woman. I will here remark, that our hops are all picked by females, many of whom spend weeks in preparation making dresses, sacks, bonnets, gloves, etc., thinking nothing of the time thus spent, if only they can have a good time in picking.[13]

Pickers were paid sometimes by the week, but more often by the box or bushel. At this stage, hop-picking was clearly as much a social occasion as one for rendering labor for hire.

The following decade the same crop was creating a similar pattern in southern Wisconsin. There, says Hibbard, "during the last of August there was a general rush of girls and boys, mostly the former, from distances of a hundred miles to the hop field."[14] "Every passenger car is pressed into service," reported the *Madison Democrat* in 1868, "and freight, and platform cars are fixed up as well as possible for the transportation of the pickers." Since hop-growing operations in Wisconsin were on a small scale, relations between farmers and harvesters remained personal in respect to supervision in the field, and the work held some of the aspects of a vacation. "Every train," said the *Democrat*, "has the appearance of an excursion train on some great gala day, loaded down as they are with myriads of young girls. The most of them have their places of labor engaged in advance." Hop growing proved to be a short-lived venture in Wisconsin, and the seasonal migration which it required disappeared with the crop.

Northern agricultural employers perceived early that a system of seasonal labor freed them from the overhead cost of paying employees year-round through periods of slack as well as of heavy work. What the northern hop-growers understood was communicated quickly to the cotton belt, the moment that emancipation of slaves ended the planters' legal responsibility for, and their property interest in year-round care of laborers. In 1867 the *Southern Cultivator* carried a letter on this point which originated in Waterloo, New York, by way of suggesting to its readers that southern cotton growers consider and perhaps adopt it. Under the headline "From a Northern Standpoint," the letter said,

"I should suppose that by the aid of gang plows, and other improved farming tools, the cotton planter could get along with a very few hands until cotton picking time, then he could do like our hop growers, hire girls from the villages."[15]

A few planters occasionally had engaged extra nearby help for cotton picking, but this practice was not general. Until the end of the second or third decade of the twentieth century, the northern hop-growers' suggestion from experience remained practically unused in the older areas of cotton production, and certainly was undeveloped until later. However, when cotton growing was extended into fresh areas not already populated heavily with slave laborers, the pattern of migratory seasonal labor appeared quickly. Thus when the War between the States cut off northern mills from their usual supply of raw cotton, the growing of cotton was stimulated in southern Illinois. There, in the absence of established plantations well-supplied with pickers, families for harvest were secured "from the South," meaning probably from west Tennessee.[16]

These fragmentary early records suffice to make clear that whenever and wherever men began to grow a crop with an acute seasonal harvest labor requirement, harvesters were sought from whatever distance necessary to obtain them.

The list of crops which have occasioned migration of laborers to serve their seasonal needs is long, and the migrations which they produced vary greatly in volume, in distance, and in the details of pattern. Seasonal movements of laborers to serve hay and broom corn never became very extensive. Wherever hops have been grown, they have given sharp stimulus to migration. Important as hop-growing in East and Middle West has been at times and in places, finally in the early twentieth century it became localized almost entirely in a few far western spots, principally in Oregon, but which extend from the Sacramento Valley in California to the Yakima Valley in Washington. Middle Western specialization in corn-growing has produced a minor seasonal migration, its sources principally in the farming areas of poorer soils along the southern fringes of the Corn Belt and, later, the cities of the region. The characteristic of this migration is rather a suffused northward drift and return, than well-defined streams flowing through channels.

Between the close of the War between the States and the end of the nineteenth century, a growing specialization in berry crops, fruits and vegetables to feed the demands of expanding urban markets was laying foundations in many localities for patterns of migratory seasonal labor. As early as 1853 a traveler reported seeing between 110 and 200 pickers assembled in a fifteen-acre strawberry patch near Norfolk, Virginia, which was becoming a source of garden truck for northern cities. By the 1860's a concentration of commercial strawberry and other berry crops appeared in the vicinity of Hammonton, New Jersey. First searches for

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harvesters brought German farmers from nearby for the season. Then as the berry-producing area spread quickly and included these Germans also as growers, the Hammonton growers began to go farther for pickers, and came back with principally Italians from Philadelphia. As many as perhaps 2,000 came annually in special trains during the early nineties. In later years, this influx of migratory laborers would have been reduced by the falling demand for New Jersey strawberries except that the strawberry acreage was replaced by other berry crops which also required numerous pickers.

Elsewhere over the country in places as far separated as Virginia and Michigan, wherever commercial berry crops were being produced, migrations appeared similar to those which converged annually upon southern New Jersey. Pointing out that berry districts "must not be too remote from labor centers, if labor is to be retained at a reasonable cost and in a necessary amount," the Census of 1900 proceeded to describe the contemporary migration in the region of the Great Lakes and along Chesapeake Bay:

> Trains of flat cars, loaded with people, and especially with women and children, run from Chicago, Detroit, and other large cities every morning, and back every night during the berry season. Steamboat lines carry thousands of berry pickers from Chicago to the strawberry fields about St. Joseph and Benton Harbor, Michigan; and Baltimore every year sends thousands of berry pickers out into Anne Arundel and other strawberry counties of Maryland.[17]

Migration to the area of berry production in southern New Jersey attained an impressive scale and character. A field agent of the United States Immigration Commission described in 1909 the seasonal arrival of berry pickers in the vicinity of Hammonton, New Jersey:

> In the early nineties something like 2,000 came yearly in special trains. . . . At the present time [1909] there seems to be no farmer who uses more than 70 pickers. . . . There is a general complaint that laborers are scarce, exacting, and not very efficient this season. The cause of the scarcity is given as the more numerous opportunities for finding employment in the city. The strawberry season is short. . . . These pickers nearly all come from Philadelphia and Camden. . . . The farmers obtain these Italians with the help of padrones. . . . The work in the country appeals to men with families of young children; almost any youngster can pick or carry boxes and trays to the berry house. One sees children of 5 or 6 years trudging back and forth with trays or gathering a few berries. In a good year large families have been known to earn from $400 to $600 for a full season. The "boss" charges the prospective pickers 50 cents or $1 each for finding places for them. . . . Another growing source of supply . . . is . . . local. . . . A number of the large growers . . . secure all the pickers they need

in the village or near it. . . . Having finished the strawberries, the contractor moves his gang northward . . . for the first fruits of the red raspberry and early blackberry crops. . . . Thus there is an itinerary of men, women, children, and household goods covering a large part of south Jersey and spanning a period of nearly or [not] quite five months. It is the real work of a great body of laborers, not an incident, but a vocation. . . . A fair percentage come simply for the fresh air and the outing. To them the berry fields stand for the seashore or mountains, and the whole excursion is for recreation. The younger people sometimes insist on giving that impression and seem to feel that some explanation or apology is necessary. . . . To society, this body of children, leaving school a month before the year closes and coming back after school opens, presents a problem. . . . The morality, health, and general well-being of these workers seem not to appeal at all to the grower. Although he may speak with disgust of their filth and low standards, it never occurs to him to ameliorate their condition or study their well-being. Every added comfort or decency is to him only an added expense. "Every year they ask for more improvements, they'll want beds next," said one wealthy grower who refused to furnish mosquito netting for their windows. Labor to many of these men is merely a commodity. The human element rarely enters. It is not likely that any great change will come except as the workers themselves demand it. A pickers' union would accomplish much, but the provincial jealousies must first be overcome. Some of the charity associations have looked into the matter with no direct results. . . . On the other side, there is no doubt that the presence of a gang of more or less unreasonable pickers is a source of irritation to the grower. . . . Everyone heaves a sigh of relief when the pickers have gone. . . .[18]

The agent quoted, who witnessed the arrival of the berry pickers, was reminded, he said, of "a train load of incoming foreigners unloaded at some small water-tank station in the Northwest, with children, food, bags, bedding, and belongings dumped in a promiscuous heap at their feet."[19] Doubtless appearances of the two scenes were much alike, but the resemblance was superficial, for the foreigners streaming to the Northwest were landseekers, not seasonal laborers. Most of them would buy land at once, and the rest would become landowners after a short period of labor and perhaps tenancy; Those bound as berry pickers for Hammonton had little or no prospect on the land beyond a season's work for wages. They constituted a distinct type of laborer in agriculture, a type now well-developed, and recognized as inseparable from, and indispensable to the conduct of most specialized agricultural enterprises. This is stated succinctly in another field agent's report on similar seasonal labor in Oneida, New York:

> The farm managers say that if it were not for the opportunity to employ immigrant labor it would be impossible to carry on the business on its present large scale. All immigrants interviewed expressed themselves as being contented and declared their intention of returning next season.[20]

Through the period between the world wars families have continued to come to southern New Jersey for the strawberry, raspberry, and blackberry harvests, and for potato picking, oyster shucking, and fruit picking as well. Together, these crops draw migrants from virtually every state lying southward along the Atlantic Coast. Prominent among the pickers are Negroes who come all the way from Florida in considerable numbers. Today the motor truck and passenger automobile have replaced the train as principal vehicle for transporting the migrants.

Cranberries are produced in a few small spots prepared usually by heavy capital investment. "To one who has had little experience in small-fruit growing or in intensive commercial farming, a cranberry bog is an interesting revelation of the possibilities of capitalized agriculture," observed the United States Immigration Commission in its 1910 report. Bog lands represented investments of $500 to $800 for every acre in full bearing. "The best bogs represent an outlay of $800 an acre; in fact owners capitalize them for investment purposes at $1,000 an acre and expect 10 percent on the investment."[21] Essentially, this is factory production. It creates sharply defined seasonal movements of laborers to harvest the crop, and its commercial success is dependent upon the continued annual coming of sufficient pickers.

On Cape Cod in New England cranberries have been raised as a commercial crop from the eighteen-fifties, and have been produced there on a large scale since the 1880's. The growth of a pattern of migratory seasonal labor as it unfolded step by step with the expansion of cranberry production on the Cape has been recorded in illuminating detail by the United States Immigration Commission. It was more than growth in numbers and extension of distance; it was a process which included qualitative change as well, as one nationality replaced another among those who migrated. The first pickers of cranberries on the Cape:

> were Americans from the neighborhood or from towns not far distant. Frequently a good many mill hands, as well as farmers' families, came out to help. When this source of supply became inadequate, owing to increasing acreage and disinclination of Americans to do this sort of labor, the growers sought other pickers. The employment agencies sent out Finns and the Padrones brought out gangs of Italians.[22]

Later the Finns moved westward to mines in Wisconsin and Michigan, and the Poles, who also had been employed as pickers at the close of the century, left for work in the mills or for steady employment on farms. By

1909, when the Immigration Commission made its own field survey of the cranberry bogs, the predominant nationality of pickers had changed once more. About 3,000 of them, or two-thirds of all pickers at the time, were black Portuguese "Bravas" from the Cape Verde Islands. These came annually for the season from the coast cities, and some of them even from their native islands to which they returned at the end of the harvest.[23] Those of the Portuguese who remained over the winter in Massachusetts filled the period between cranberry harvests with such intermittent work as they could find at miscellaneous employments. Portuguese "Bravas" in the 1940's still constituted a large part of the seasonal labor supply for Cape Cod cranberry production.

A close relationship was recognized between the degree of dependence of particular cranberry growers upon outside laborers and the scale upon which they produced. The Immigration Commission observed:

> The large growers--those with from 6 to 100 acres in a bog--are the principal employers of outside Portuguese. On the small bogs it is often quite possible to obtain a number of pickers in the neighborhood, and white families from the towns come out to earn a little money on the bogs near at hand.

Significantly, the witness who told the Commission that "the black Portuguese are the only dependable supply of labor that we have; no other sufficient supply remains," was superintendent of one of the largest bogs on the Cape.[24] This relationship made note of about 1910 in the cranberry bogs of Cape Cod--that the greater the size of the individual enterprise, the greater the dependence upon migratory labor--prevailed generally in the forties in whatever forms of agriculture which required seasonal labor.

Around the end of the nineteenth century the bogs of Wisconsin also became areas of intensive cranberry culture. Step by step with production arose new requirements for laborers to make the harvest. A field agent of the Immigration Commission has described the growth of the Wisconsin migratory labor pattern. Local pickers, frequently farmers who worked seasonally for the smaller cranberry growers, were not sufficiently numerous. Additional pickers came for the harvest of five or six weeks' duration from distances up to twenty-five or thirty miles. These generally were Polish farmers, or farm laborers, and their families supplementing other employment. "It all goes to aid him in eking out a livelihood," said the Commission. Usually these were recruited in gangs under an overseer; transportation and housing were furnished by the growers. The larger bogs employed principally Indians who came in family groups by wagon and buggy if from shorter distances. If attracted from longer distances, they came in gangs by rail, their transportation paid by the growers. The field agent summed up his impressions of the Indians

by saying that "for four or five weeks the family picks berries during the day, gambles in the evening, and sleeps until the dew is off in the morning."[25]

The same force of expanding markets which was stimulating specialized production of berry crops and creating recurrent migrations of laborers to harvest the berries was producing similar effects in the production of fruit. At places along the Atlantic Coast, from the valleys of Georgia northward to those of Virginia and New York, and on the Eastern Shore of Chesapeake Bay, men were planting commercial orchards. One of the very earliest descriptions of fruit harvest labor migrations to the Eastern Shore is from a correspondent whose letter was published by the *Country Gentleman* in 1881 under the title "Peach Plucks." The Maryland author wrote:

> This name may be new to many of your readers, but being a very valuable institution for a few weeks during peach season, to our farmers, it may interest some to know who they are and where they come from. Few people watch the reports regarding the prospects of peaches with more interest than they do, and if this meets the eye of any, and I am sure it will, for all classes seem to read the COUNTRY GENTLEMAN, from the preacher to the regular bummer, I will say to him that there is a very poor prospect for work this season, as the crop will without doubt be a small one, and in some sections an almost entire failure. I hear, however, that in our county there will be a moderate crop of certain varieties.

Evidently from the beginning, migrants have watched the farm journals and newspapers for crop reports, as guides and time tables for their own movements. The letter continued:

> The "plucks" begin to move towards the Eastern Shore about the middle of May, and when assembled on a farm for work at picking peaches, where fifteen or twenty thousand bushels are to be marketed in a few weeks, they represent the world on a small scale. . . . In some orchards regular sheds are erected, with berths in them, and in other cases barn lofts and other outbuildings are used for sleeping in.

The attitude of the writer of the letter, who, if not an orchardist himself, evidently was well acquainted with those who were, is curiously revealing. In face of the plain fact that the planting of orchards produced this migration, the author looked elsewhere to find the cause and found it in liquor. "What has brought about this migrating army of peaches plucks, with all the misery and degraded manhood that follows such a condition?" he wrote; then answered, "Foul whiskey tells the tale." His own assurance of the validity of his answer, however, was something less than complete, for he continued, "yet it is a fact that some will

not touch it while the season lasts, even refusing the usual free drink in the morning that some dispense as an inducement to be on hand as the sun peeps up; but few, very few, are among the missing."

It is clear that the correspondent was greatly impressed with the extent of the use of liquor, the card gambling, and the sabbath-breaking among the migrants, yet he did not fail to record, with a suggestion of awareness of the inconsistency, such facts as might disturb confidence in the validity of his own conclusions. He wrote:

> There are few countries but what are represented, and all classes of society. One is reminded of the saying that extremes meet, for in a peach orchard all characters can be found; some who bear evidence of refinement, education and culture, and others just the reverse. Some will be seen during idle moments taking notes, or recording their passing thoughts in their dairies; others playing cards, and of this class there are many who will work hard all the week, and before the Sunday passes every cent will be in the hand pockets of the successful gambler. Others will leave for the city, spend their money for whiskey, and return without a cent. Another portion will stroll to some retired place, and quietly sit for hours as if in deep meditation about their homes, or perhaps their distressed families. A few will carefully save every cent as closely as a miser, promising themselves to be reformed men, and I have no doubt entertain a fond hope of a reunion with some loved wife and children, and yet may fail when within sight of the desire of their heart. . . . It may seem strange, yet I have been told that as a general thing these plucks are honest--at least that nothing is ever missed, although every chance is offered for stealing. . . . With many, Sunday is dreaded, as they would prefer working; but our farmers, as a rule, forbid work on the Sabbath. With those who would prefer working, the day is a dull one, but they will select some retired place and play cards all day, blacks and whites mingled together. Others under no circumstances would touch a peach or card on Sunday.

The orchardists' pleasure in the skill of the "plucks" upon whom they depended appears in the concluding sentence of the letter, a sentence of unstinted praise such as one still hears where fruit is picked and packed by migratory workers. "It is amusing to see with what expertness some of them will assort peaches," he wrote; "a defective peach seems to stick to their fingers as if by magic."[26]

Vegetable production for market was expanding step by step with berry and fruit growing and, for the same reasons, wherever vegetable production appeared the amount of labor employed for a season was increased and the traditional practices of farmers were altered. Indeed, the alteration was so pronounced that the special name "market gardener" was applied to them more often than the older term "farmer."

The great amount of care required for intensive production of vegetables soon led market gardeners to abandon the farmer's traditional maxim that he should do all his own work. They began promptly to employ for the season all the hands they could use with profit. If the producing area was close to cities, market gardeners staggered their plantings in order to achieve as nearly as possible a continuous flow of one kind of produce or another to market throughout the growing season. They sought even to lengthen the season by construction of hothouses. For the laborers, a longer season of employment was the result.

In areas distant from centers of consumption the difficulty and high cost of transporting fresh vegetables to market prevented, or seriously limited, competition with local growers adjacent to market during the season when climate permitted the latter to produce. Plantings in distant areas, therefore, were arranged to place fresh vegetables on the market during local off-seasons. Frequently this period of advantage for any one distant producing area was very brief. As a consequence, the growers' best method of profiting was to move the greatest possible volume of vegetables within his period of advantage. His best method of growing was to assemble for an extremely brief employment far greater numbers of laborers than could obtain work in the locality at any other time. William Gilmartin wrote:

> The development of specialized truck crop production distant from market created a changed attitude toward vegetable farm laborers by growers. The problem became one of obtaining a large labor supply during a short season and of avoiding the cost and responsibility for maintaining this labor the remainder of the year.

When enough seasonal workers could not be obtained locally, they had to be brought from elsewhere, or the industry could not operate on the chosen pattern. Gilmartin wrote in 1942:

> To the large-scale corporate vegetable enterprise, labor is an impersonal element to be used in the production of merchandise. The farm worker is an essential tool just as is the tractor and the grading machine. The interest of the enterprise in its labor comes to a focus on the balance sheet of the company and accounting calculations set the tone for all aspects of labor relations. . . . Organized truck farming interests have participated in labor relations activities directed toward (1) maintenance of a large labor supply through immigration encouragement and labor recruiting programs, (2) prevention of the extension of social legislation to agricultural workers, (3) disruption of organization movements among farm workers, (4) resistence to the establishment of mediation and arbitration for the conduct of agricultural labor relations, and (5) opposition to governmental relief and welfare programs for farm workers during period of labor demand.[27]

The Bureau of the Census reported in 1900:

> In highly specialized districts, where one, two, or three crops comprise substantially the entire output, the labor required for the one or two months during which these particular crops must be gathered and put upon the market, is much larger than that needed at other seasons of the year. This is especially true in districts where small fruits or green peas, or other crops similarly difficult and tedious to harvest are grown in large quantities; hence where transient labor is readily procurable, one man can handle a much larger quantity of land in truck of this character at a relatively small increase in cost with proportionately increased profits.

During the second half of the nineteenth century, production of vegetables for northern markets expanded down the Atlantic coast, first around Norfolk, Virginia, then into South Carolina and Georgia. As it spread, it encountered at first a labor condition which differed completely from that which prevailed in the North. Instead of using free white laborers on general farms, the chief labor supply along the southern coast was provided by plantation slaves. Slavery required the owner to maintain the slave during times of idleness as well as of labor. This was the very burden which the short season truck grower could not afford to carry. Thus security of the slave stood as an obstacle to the extension of vegetable production. No one saw this more clearly than the masters. Twenty years after emancipation, an ex-slaveholder, named A. Oemler, pointed out this previously unsuspected advantage of free labor. In his history of truck-farming in the South he wrote:

> The death of slavery was, so to speak, the birth of truck farming on an extensive scale in the South Atlantic and Gulf States; indeed it would otherwise have been impossible. I was probably the largest slave-owner, engaged in vegetable culture, in this section; but of forty-five grown negroes, twenty-six only were available as field laborers . . . and at no time could I have controlled more than that number of hands, and few, or none, could have been hired. At the present time [1884] there are in the vicinity of Savannah many truck-farmers who employ one hundred to two hundred laborers during the picking season.

These seasonal laborers were drawn, he said, from "the better class of negroes who collected on the outskirts of towns after emancipation, those willing to do some work."[28] Thus slavery retarded the vegetable industry in the South until, as Gilmartin says, "emancipation neatly solved this problem."

* * * * *

The expansion of sugar beet culture, stimulated by passage of the Dingley tariff of 1894, promptly produced seasonal movements of laborers to and from virtually every area where beets were planted. Many new workers were needed at once to perform the hand operation in late spring of blocking and thinning fields to a proper stand of young plants, and again in the fall of topping the beets with a machete-like knife. The movements of labor which this crop set up in various parts of the United States were twofold; a seasonal migration in and out of each area to meet seasonal peak requirements; and a steady accretion to the resident supply of laborers which expansion of this form of intensive agriculture invited.

The work operations that required seasonal laborers involved several elements which, together and in varying degrees, distinguished beet work from usual farm labor. In general these were arduous, performed by hand, required very long hours, and utilized women and children in family groups. Usually they were paid for on contract at piece rates by the acre or ton. They were founded upon an employer-employee relationship; they frequently introduced new nationalities into old farming areas; they were part of a highly industrialized form of agriculture, controlled at many points by the processing plants which financed production, recruited labor, supervised production in the field, purchased the product--beets--and manufactured these into sugar. Except in places such as Morman settlements of Utah, where beet fields remained small and local supplies of family labor were large, this combination of elements stamped sugar-beet employment at once as a "different" kind of farm work.[29]

"The average farmer does not like to do it," said the president of a New York sugar company about beet thinning. "Are most of the farmers in your vicinity native Americans?" the sugar company president was asked by a commissioner. "Yes," came the reply, "and that is not conducive to beet raising." Question: "Why not?" Answer: "Because they do not like to get down on their knees. The most successful beet raisers we have are the foreign element that are not afraid to work."[30] "The average man does not like to do it," he added; "Why, you know there is hardly any machine today but the man rides." The director of the Michigan agricultural experiment station estimated that an acre of beets is equivalent to a row five and one-half miles long, then observed that "for a boy or woman to get down on the knees and creep 5-1/2 miles is a rather onerous undertaking."[31] "In the sugar-beet fields, for weeding, hoeing, etc.," wrote the Michigan Secretary of State, "the Germans, Polanders, and Russians seem to be the most effective."[32]

In summary of national experience with sugar-beet work a decade earlier, the Industrial Commission of 1901 had declared:

The sugar beet industry, wherever it is started, offers especially favorable opportunities for foreign farmers and laborers. There are now . . . 3 factories in the [New York] State, with a nominal daily capacity of 1,000 tons of beets; but the success of the industry largely depends on securing farmers to raise the beets and laborers to work at their culture. A prominent maker of beet sugar in the State gives it as his opinion that Americans are not suited to this work; that the prevalence of American farmers in a neighborhood is a drawback to beet raising, and that the tedious hand culture required for the crop the American laborer will not give. . . . So that beet-sugar makers are perforce obliged to turn to the foreign element who are accustomed to and willing to do this class of work. It will be noticed in accounts of the beet industry in the different States that in all of them foreigners are assisting in carrying on the industry, and are succeeding well.[33]

In some localities it was possible during the first year or two of beet production to recruit sufficient local labor to avoid importation of seasonal workers from a distance. Thus a factory president in New York told the Industrial Commission in 1900:

You can get all the help you want in Binghamton. The way I did last year was to establish a tent on the bank of the river and board the help, and it was sort of a picnic for the boys to come out there. I could get three boys to come out and live in the tent and work in the beet fields, where I could hire one and send them back home at night.[34]

In the South Platte Valley of Colorado, as in Utah, the greater part of the beet work was done in very early years by local boys and girls, and by the farmers themselves. This was possible so long as the beet fields were small.[35]

But the necessity, if sugar beets were to be raised, for inducing seasonal laborers to migrate to areas producing beets appeared almost immediately. In Michigan, the Industrial Commission found:

It is very difficult to get the labor needed. This is partly due to the fact that this factory was located in a district already given up to peach growing, which requires much labor at the same time that the beet crop requires it. Russian Jews and other foreigners are brought over from Chicago during the two busy seasons.[36]

The Commission, reporting barely four years after the tariff act, found in Nebraska that "The sugar-beet industry in this State is opening up opportunities for immigrants. One large corporation is making especial efforts to bring to its farm laborers either from rural districts or from cities."[37] The general manager of a Nebraska sugar company wrote:

> We are making a strong effort to bring to this farm laborers either from rural districts or from cities. We are continually bringing people from cities in this State--for instance, Omaha, Lincoln, and other points--to our farm. . . . Our success in developing an elaborate agricultural enterprise depends, in my opinion, largely upon our ability to collect these people, and especially those having large families, and giving them profitable employment. . . . There is now, although the industry has only made a beginning, a strong and growing demand for farm laborers and tenants, and in a degree to bring factories in competition with one another to secure such labor. For instance, on one or two occasions factories in Colorado have competed strongly with factories in Nebraska for Russian labor, which centers about the city of Lincoln. The Russian labor of which I speak is that of Russian Germans--the people are Teutons, not Slavs. . . . We make so strong a point of getting men with large families that we refuse employment, as a rule, to those with small families.[38]

The difference between slack employment on the company farm in February 1900, and the peak employment of June, was the difference between 204 and 1,217 persons on the payroll. This difference is a gauge of the pressure for mobilizing distant laborers.

Repercussions on the farm labor pattern followed wherever beet sugar factories were built at the end of the nineties and in the early years of the twentieth century. At Idaho Falls, five years after the factory was built, the Immigration Commission found that of the hand labor operations, "the Japanese do much the greater part and the German-Russians do most of the remainder. The white persons, other than German-Russians, employed are chiefly members of the families of the growers and school children. A few transient white laborers are also employed."[39]

Beet work around small factories established in Oregon and Washington in 1898 and 1909 was performed mainly by Japanese.

> The settlement and cultivation of the land in many cases has followed the introduction of an irrigation system. The population is sparse, and agriculture is conducted, for the most part, on a large scale. As a result the problem of farm labor has always been pressing, especially in the sugar-beet industry, where the tracts of land devoted to the growing of beets are very large.
>
> During the first year or two of the industry the sugar company and other beet growers relied on so-called "hobo whites"--a term applied to transient white laborers--to do the hand work of the beet fields. The results were very unsatisfactory. The men could never be depended upon to remain throughout the season to finish their work, and such work as they did do was of poor quality. Finally the company turned for relief to a Portland contractor, who agreed

to furnish a sufficient number of Japanese to do the work. This arrangement was maintained for a few years, until local contractors appeared and offered to supply hand workers, who in 1909, were secured entirely from three local Japanese "bosses."[40]

In Wisconsin sugar-beet factories promptly began the practice of bringing immigrant labor in order to secure larger production of beets to manufacture. In 1908 Belgians, Russians, Germans, and Bohemians constituted about 90 percent of the immigrants employed. A small sprinkling of Poles, Magyars, and Japanese--the latter brought from Colorado--were also employed. These European immigrants were recruited mainly from cities in northern Illinois, but also from as far as St. Louis, and from Akron and Cincinnati in Ohio.[41]

The impact of sugar-beet production on labor in a general farming area has been well described by the Immigration Commission.

> When sugar-beet culture first began in northern Ohio, all the work was done by the farmers themselves, supplemented by local gangs of laborers, men, women, and children from the community and neighboring towns, collected by the agents of the sugar company. The rapid extension of the beet area in the past few years has made it impossible to secure sufficient laborers in the localities where the beets are grown or to keep the gangs intact through the season. The cultivation of sugar beets requires so much more hand labor than ordinary farm crops grown in northern Ohio and the margin of profit to the grower is usually so small that few farmers cared to undertake beet culture unless a labor supply was assured. To obtain a sufficient acreage the sugar company was obliged to provide laborers. Local laborers are still used to some extent in localities where the acreage is small. Immigrant labor is more easily available, however, and can be handled to better advantage. The immigrants first employed were those races which were most easily secured. Germans were brought in from the far western fields in large numbers about three or four years ago, but they were found to be less satisfactory than the Belgians, the best laborers yet tried.[42]

By 1909, therefore, imported hand workers were all Belgians. In winter they worked in various industries in and around Detroit, principally at lumbering. These were largely single men recruited in Detroit and neighboring communities, largely with the aid of Belgian "saloonkeepers, boardinghouse keepers, and small shopkeepers."[43] In the fields they worked in gangs of usually five men, boarding themselves.

In the sugarcane fields of southern Louisiana similar incursions of Sicilians furnished for a time a substantial element in the harvest labor supply. The Industrial Commission reported:

> The season of cane cutting is known by Italians as "la zuccarata," and each year before "la zuccarata" thousands of Sicilians go from Italy and also from the Central and Northern States, to Louisiana and Mississippi; so there is a fluctuation of Sicilians from Louisiana and Mississippi the latter part of the winter, when "la zuccarata" is over, to the railroad and excavation works of the North, and from the North back again, early in the fall, before "la zuccarate" is begun.[44]

The principal sugar-beet producing state throughout most of the history of the beet-sugar industry has been Colorado. There the efforts to stimulate migration of laborers to the sugar-beet fields reached greatest proportions. These began almost at once when sugar factories were constructed, and were undertaken by the processing companies. The Immigration Commission reported:

> In the early years of the industry in Colorado, three different races of immigrants were imported from other States by the sugar companies. German-Russians were brought in from Grand Island, Nebr., by the trainload, and Mexicans were similarly brought in from Arizona, New Mexico, and El Paso, Tex. Many of those coming from El Paso are said to have been induced by liberal advertising to come directly from Mexico. Some Japanese were imported from California. In nearly all cases the fares of the laborers were paid by the sugar companies, and often they were provided with tickets for their return at the close of the season. This was true especially of the German-Russians who were first brought to southern Colorado. The first year (1899) that they were employed in that district 75 families were brought from Grand Island, Nebr., at the beginning of the thinning season and returned to Nebraska at the end of the year. More were secured in the same way the second and third years, but after that the increasing resident German-Russian population, together with unsolicited immigration from Nebraska and from Russia, was found to be sufficient to supply the needs of the labor situation, and the policy of furnishing railroad transportation was discontinued.[45]

Discontinuance of labor shipments was only temporary. Between 1915 and 1928, a period for which figures are available, the single company that dominates production in northeastern Colorado shipped more than 92,000 Mexican and Spanish-American seasonal laborers into its Colorado, Wyoming, Nebraska, and Montana territories. As many as 14,500 were transported in a single year, and never less than 500. These figures do not include those workers who transported themselves to the beet fields.[46]

Special efforts were made, including company assistance toward the workers willing to remain in the beet-producing area over the winter.

The success of this attempt in northeastern Colorado to diminish the volume of seasonal migration can be gauged by the increase in the number of Spanish-speaking laborers remaining there over the winter--from 537 in 1921 to 2,084 in 1927. These figures omit other than Spanish-speaking laborers who came to the beet area originally as laborers and later, in substantial numbers, became growers of sugar beets on their own account. By 1909, a decade after the first sugar factory, there were already 665 German-Russian, 133 Japanese, and 20 Mexican beet growers. In 1927 these numbers had risen, respectively, to 2,590, 191, and 153, or from a total in 1909 of 818, to a total in 1927 of 2,934.

FOOTNOTES

This study, except for final editing, was prepared in the middle 1940's. Attached hereto are four related, previously unprinted studies on migratory labor prepared in the mid-thirties and mid-forties by the present author. Reference is made additionally to the following previously printed studies on the same subject by the same author:

"Migratory Farm Labor in the United States," *U.S. Monthly Labor Review*, 44 (1937), 537-549.

"Migratory Agricultural Workers on the Pacific Coast," *American Sociological Review*, III (1938), 225-232.

"Adrift on the Land," Public Affairs Pamphlet No. 12 (1940), 31 pp.

"An American Exodus" (with Dorothea Lange), 1939, 1969.

"Good-by to the Homestead Farm: The Machines Advance in the Corn Belt," *Harpers Magazine*, May 1941, 589-597.

"Perspective on Housing Migratory Agricultural Laborers," *Land Economics*, XXVII (August 1951), 193-204.

Origins of Migratory Labor in the Wheat Belts of the Middle West and California. Hearings before Senate Subcommittee on Migratory Labor. 91st Cong., 1st and 2d sess., part 8-C, 1970, 6258-98.

"Hand Laborers in the Western Sugar Beet Industry," *Agricultural History*, XLI (1967), 19-35.

[1]U.S. Bureau of the Census. *Vegetables*, VI, pt. II, 1900, p. 307.

[2]Massachusetts Board of Agriculture Annual Report, 1954, 229-30.

[3]*New England Farmer*, IX (1887), 27.

[4]*Genessee Farmer*, XVII (1856), 45.

[5]U.S. Industrial Commission, XI (1901), 87.

[6]*New England Farmer*, VII (1929), 391.

[7]*Rural New Yorker*, VIII (1857), 205.

[8]*Genessee Farmer*, XIX (1856), 144.

[9]*Country Gentleman*, XXVIII (1866), 219.

[10]*New England Farmer*, IX (1831), 414.

[11]*Cultivator*, IV (1847), 336.

[12]*Country Gentleman*, XXXV (1870), 636.

[13]*Ibid.*, I (1853), 99.

[14]B. H. Hibbard, "History of Agriculture in Dane County, Wisconsin" (1904), 151.

[15]*Southern Cultivator*, XXV (1867), 132.

[16]*Country Gentleman*, XXVII (1866), 27.

[17]U.S. Bureau of the Census. *Vegetables*, VI, pt. II, 1900, p. 307.

[18]U.S. Immigration Commission, XXII, pt. 2, 519-530 *passim*.

[19]*Ibid.*, 525.

[20]*Ibid.*, 517.

[21]*Ibid.*, 539-40.

[22]*Ibid.*, 542.

[23]*Ibid.*, 547.

[24]*Ibid.*, 542-43.

[25]*Ibid.*, 559.

[26]*Country Gentleman*, XLVI (1881), 327.

[27]William M. Gilmartin, "Truck Farming in the United States: A Study of the Industrialization of Agriculture" (unpublished doctoral dissertation, University of California, Berkeley, 1942), 130, 142.

[28]"Truck Farming," Annual report of the U.S. Department of Agriculture, 1885, 388-9.

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[29]See also Taylor, "Hand Laborers in the Western Sugar Beet Industry," *Agricultural History*, XLI (1967), 19-26.

[30]Industrial Commission, X (1901), 555.

[31]*Ibid.*, 574.

[32]*Ibid.*, XV, 531.

[33]*Ibid.*, 524-5.

[34]*Ibid.*, X, 555-6.

[35]Taylor, "Mexican Labor in the United States: Valley of the South Platte, Colorado" (1929), 103.

[36]Industrial Commission, XV (1901), 533.

[37]*Ibid.*, 547-8.

[38]*Loc. cit.*

[39]Immigration Commission, XXIV (1911), 145.

[40]*Ibid.*, 149.

[41]*Ibid.*, XXII, 566.

[42]*Ibid.*, 571.

[43]*Ibid.*, 569.

[44]Industrial Commission, XV (1901), 503.

[45]Immigration Commission, XXIV (1911), 117-18.

[46]"Mexican Labor in the U.S.," supra, note 35, 133.

WHAT SHALL WE DO WITH THEM?

By Paul S. Taylor
University of California

Address before the Commonwealth Club of California
San Francisco, April 15, 1938

We call them "Dust Bowlers." Ever since the droughts of 1934 and 1936 they have been streaming westward from the Great Plains. A count at the California border records the entry to our state by automobile alone of 221,000 refugees between the middle of 1935 and the end of 1937. More than four-fifths of them came from the drought states. In vivid phrases they tell us the tragedy of Nature: "Burned out, blowed out, eat out." What shall we do with them?

We call them "Dust Bowlers." But it is not only the parching of the Plains and the blowing of the topsoil which expels these people. If that were all, the return of rain to the dust bowl would end the exodus. But the causes are more deep-seated and more enduring than the hostile fluctuations of weather. At the close of the war, prices of cotton and of wheat collapsed, and with them, many thousands of rural families were shaken from their positions on the agricultural ladder. Farm owners lost the equities in their farms and became tenants; tenants were reduced to laborers, and farm laborers did what they could. This process, begun in the depression of the early twenties, was accelerated by the depression of the early thirties. Then came drought and grasshoppers, and whole sections of the rural population already loosened by the accumulating forces of successive depressions were finally dislodged by a catastrophe of Nature. Those not anchored by the farm program and the relief policies of the government are seeking refuge by flight.

Now the rains have come again to the Great Plains, yet the tide of refugees flowing westward scarcely slackens. The number of distressed migrants entering California during the last half of 1937 was 49,000, or only 12 per cent below the number coming during the last half of 1936 when drought was severe. And more migrants have come to California during the first quarter of 1938 than came during the first quarter of 1937. Clearly, other expelling forces than drought are at work. The effects of depression and recession are still accumulating, and now mechanization of the cotton farms is an added factor in the expulsion of farmers and farm laborers from the Cotton Belt.

We have long recognized the future displacement of southern cotton workers when a mechanical cotton picker shall have been perfected. But the serious displacement now in progress in the wake of the all-purpose farm tractor has been scarcely noticed by the public or recognized by the government. Yet tenant farmers, sharecroppers and farm laborers -- whites and Negroes alike -- are being swept from the land and onto relief in some of the most important sections of the Cotton Belt. Planters are dispensing with their sharecroppers and tenants, retaining the few necessary to operate

tractors, and paying them by the day when they work. A cotton planter in the Mississippi Delta, to cite an outstanding example, had 160 sharecropper families. He purchased 22 tractors and 13 four-row cultivators, let go 130 out of 160 of these families, and retained only 30 for day labor.

Where the tractors are appearing the rural landscape is strewn with abandoned houses. Residents in western Texas explain as they point:

> "There used to be two families out there. The tractor got both of them." "That farm has made a living for a family ever since the land was broke." "The tractors are keeping our families from making a living."

Rural schools decline. Village merchants fail. Drought undermined them, and mechanized farming finishes them. Class bitterness is stirred, and even the government program intended to benefit the farmer becomes a focus of strife. A small town postmaster explained: "The landlords get the government crop reduction money and buy tractors with it, and it's putting the renters out. The landlords take all the reduction money. If the tenants don't give 'em all, they put 'em off." From those who already have been dispossessed from the land this story of the machine comes in bitterness and despair. From those who face the same fate the story comes in stark fear.

On a Sunday morning last June I stopped at a tenant's house near the Texas Panhandle. There I found seven sturdy young men gathered together for the morning. These Texans are all displaced tenant farmers, victims of mechanized farming. The oldest man in the group is 33. All are on W.P.A. They support an average of four persons each on $22.80 a month. All are married and have families except one, who supports his mother and father. These seven Texans represent and support 29 persons. Native Americans all, none of them can vote, for Texas levies a poll tax of $3.50 on man and wife. These men, like hundreds of others, find nothing they can turn to on the Plains where they were born. They search for 200 miles in every direction and find no places which they can rent. With mechanization, the size of farms is increasing, and little is left for the tenants but sub-marginal land, relief, or flight.

This process of sweeping farmers from the land is now under way in western Texas, southwestern Oklahoma, the Black Wax Prairie of Texas, the Arkansas and Mississippi Deltas, and it is incipient in other areas. In 1930 the proportion of farm tractors in the United States which was found on farms of the ten southern cotton states was only 12 per cent. By 1937 it had risen to 18 per cent. In seven years the number of tractors in the cotton states has practically doubled.

The record of power farming in cutting cotton workers from the land is already impressive. Tenants, sharecroppers, and laborers are forced into the towns in large numbers and drawn back onto the farms for only short seasonal employment at chopping and picking time. A pattern of mobile cotton workers is spreading, with planters dependent on wage laborers imported seasonally from more and more distant towns and cities. On a Saturday morning last June I watched from 1000 to 1500 cotton hoers crowded into huge trucks

in Memphis, Tennessee, to be hauled to plantations as far as 43 miles each way for the day's work. The trucks left between 5 and 5:30 in the morning, and returned as late as 8:30 in the evening. Mostly the laborers were former sharecroppers, going back to hoe cotton for $1 or $1.25 a day, cut from the land. The cotton worker's year thus is being divided into occasional employment by the day on the plantations between May and December, and virtual idleness in the towns from December to May. The burden grows of relief of unemployed farm laborers congregated in the towns and cities of the South.

As Californians, we have felt remote from the critical problems facing the population of the Cotton Belt. But our feeling is founded upon illusion, for the Southern regional problem is national in its repercussions. California's stake in its solution is direct and immediate, for people in distress do not like to remain where they see no opportunity. Outlets will be sought wherever they seem to exist. Already from the western portion of the old Cotton Belt the victims of mechanized farming are moving West. Six weeks ago at a camp of migratory agricultural workers in the San Joaquin Valley I talked with families expelled by mechanized farming from the three states of Texas, Oklahoma, and Arkansas. From 1935 to 1937 the common explanations of the refugees were "went broke" and "the cotton burned up." Now we are beginning to hear "tractored out."

What can these people do? Where can they go? They try relief in the towns, and seasonal labor in the cotton. They try to scratch out a living on the sandy and exhausted farms of their native states. They seek a precarious foothold on cut-over lands of the Pacific Northwest. They try for jobs in the shrinking labor markets of the industrial North. They join the migratory agricultural laborers of Arizona, Oregon, Washington and California in the West, and of Florida in the Southeast. Most of those who leave the Cotton Belt come west. The time has certainly arrived when as a Nation, as well as a State, we must ask the question, "What shall we do with them?"

First there is the problem of relief in California. We all know that refugee families are often destitute when they arrive, or commonly they become so during slack seasons. We all know that during recent weeks the Farm Security Administration has been obliged against the wishes of State authorities to relieve the distress of more than 9,000 families who have been in our State less than one year. With prospects of more refugees to come, we are apprehensive and alarmed at the cost. We are harried by the fear that indigent refugees will acquire by a year's residence the legal right to continuing relief at our expense. In this state of mind, our California agencies have taken stern measures. The chief of police of Los Angeles tried illegally to blockade the border. Our state administration now denies relief from state funds, and also denies access to Federal W.P.A. funds to those in distress during their first year in California. If they apply for needed assistance, we give these transients only temporary relief while their residence in another state is being verified. Then we offer to pay their transportation back. If they refuse, we grant no further relief, and they must shift for themselves.

The states from which the refugee families depart increasingly are reluctant to accept the return of their distressed families, even at our expense. Authorities of Arkansas, for example, have recently advised the transient whose transportation back California is ready to pay, that relief funds in Arkansas are inadequate, that granting relief there usually involves delay, and that sometimes it is impossible to give any aid at all to persons in need. As a further deterrent this Arkansas citizen in distress in California is required to write back home "explaining...why you think that coming to Arkansas will be the best plan for you" before Arkansas authorities will decide whether or not they will authorize return. In a letter dated February 23, 1938, the welfare director of a county in South Dakota denies any responsibility at all for a family in distress in California which left his county only a few months ago. He writes to our authorities:

> "...We wish to advise that Mr. Ford left South Dakota in the fall of 1937 for the purpose of establishing a home. Therefore he does not have a South Dakota state settlement and authorization for his return cannot be secured. We trust the above information will be of some assistance to you in planning for your client."

Other states impose similar obstructions.

Thus the states of emigration vie with us and with the other states of immigration in seeking to avoid responsibility for destitute farm families who have enough initiative to seek economic opportunity through migration.

The futility of our relief procedure is understood by the refugees themselves, who generally adopt one of two courses:

(1) If they want a temporary pleasure trip home from the coast, they accept California's offer to pay their transportation back. A letter dated February 2, 1938 from the county relief administrator of LeFlore County, Oklahoma, who figuratively throws up his hands at the whole proceeding, reveals the situation:

> "...I wish to advise that it is humanly impossible for me to investigate and establish citizenship in this county of families desiring to return from California.
>
> "In this department I have no case workers and the County being the third largest in the State, it is all I can possibly do to look after the people now in this county. In the past I have authorized the return of a goodly number of families from your state, and after they paid a short visit to their relatives and friends, they all returned to California, with one exception. In view of this fact I feel that it is an imposition upon your state as well as a burden on myself to investigate these cases and authorize return from which it seems, that in all cases, it is just for a visit."

(2) If they do not accept their transportation home "for a visit," and the great majority do not, they simply tighten their belts, and with the aid of friends and intermittent work stick it out until a year's sojourn within the borders of California gives them the legal right to demand relief from our state.

We may as well face the fact that we cannot stem the tide by withholding relief from the destitute men, women, and children who are taking refuge within our borders. Our western growers and labor contractors invite and even aid some of them to come -- both whites and Negroes. But they need no specific invitation, for we use them to harvest our crops and they are turning their backs on closing opportunities at home. However meager their existence as migrants on the Pacific Coast, it offers more than the prospect of indefinite dependence on relief at home. So long as this differential in opportunity exists, they will continue to come. As an attempt to check migration, therefore, our present relief policy is futile.

This is not to say that state administrators and state legislators are either perfidious or inhumane. Their failure to meet the distress of the migrants lies in the fact that the problem inherently transcends state powers and responsibilities. It cannot be left safely to the several states.

What shall we do? A California Representative has introduced in Congress a bill providing federal reimbursement to the states for relief granted to transients, prescribing uniform state residence standards, and interposing a check to this growth of a population legally without home, by requiring that residence in one state shall not be lost until it is acquired in another.

Some Californians, our State Relief Administration and State Chamber of Commerce among them, believe that this bill introduced by Congressman Voorhis should specify state residence requirements more stringent than self-maintenance without relief during 14 months out of 24. But before pressing for serious modification of the terms of prospective federal aid we Californians will do well to remember two facts: First, we are asking 48 states to vote money which will go mainly to a half dozen states, and primarily to our own. Second, if by insistence we jeopardize passage of a bill extending federal aid, the burden of relieving these people falls on us both legally and in fact, at the end of one year's residence in California. It seems plain, therefore, that not only common humanity but state economy as well, dictate that we urge the California delegation in Washington to demand passage of the Voorhis bill.

But relief of the distressed is not the only problem which centers about these people. Two years and a half ago in this forum I outlined a program for the abolition of squatters' camps in our state. I can report substantial progress in that direction. The Farm Security Administration now maintains seven sanitary camps for migrants. Visit these camps as you drive through the southern San Joaquin Valley at Shafter or Arvin, at Indio in the Coachilla Valley, at Brawley in the Imperial, or at Marysville in the Sacramento Valley. These camps are accomplishing what was promised of

them, by promoting public health and sanitation and raising morale. In addition to the seven camps already in operation, three more are under construction.

But the task is not ended. Preventable disease still stalks the migrants and endangers the public health. In 1936 most of the typhoid cases in our state originated among the migrants. This year typhoid has again broken out on their trail. It started among the pea pickers at Calipatria in February, and promptly was carried to the San Joaquin Valley. Smallpox, too, has appeared. Prompt measures by the State Department of Public Health, which has just administered 20,000 inoculations for typhoid and 56,000 vaccinations for smallpox, have checked the spread of these diseases. When the migrants need medical care and lack the money to pay for it, they face two alternatives. Either they are rejected by the county hospital authorities on the ground they are not residents, and so fail to receive treatment, suffer needlessly, and endanger the health of the community; or else they are accepted reluctantly, and the heavy cost of their care is imposed on the counties where they happen to be when they fall sick. Both alternatives are undesirable.

What, then, shall we do next about the problem of public health, sanitation, and medical care? First, the State Division of Immigration and Housing, which is responsible for inspecting labor camps, has been crippled. We should strengthen it. Second, we should ask the federal government to share the costs of medical care of transients. These steps we should take for our own protection as well as for the protection of the agricultural workers.

And in addition, we should extend to agricultural workers the protection of social security laws, which, granted them in England and a dozen other countries, is still denied them in the United States.

Thus far I have answered your question "What shall we do with them?" in these terms: We cannot stop them from coming by refusing to give them relief in California when they need it. They are forced from their own communities; directly and indirectly we invite them; we use their labor. Not only are they here by tens of thousands of families, but more are coming. These simple facts we must face. It follows as elementary, therefore, that whether we like them or not, we dare not tolerate in our midst their hunger and the malnutrition of their children, their unsanitary living conditions, and their disease. Neither the State of California nor the United States can postpone or avoid this responsibility.

But in your minds lie questions deeper than those which I have answered. You wish to know: Is there nothing we can do to check this stream of refugees which pours in upon us and threatens even to grow larger? Is there nothing we can do to so incorporate into our economic life those migrants whom we must receive, that the problems of relief, health, housing, and industrial strife which are now so pressing may not permanently afflict our agriculture? In brief, we face the question: What can we do to introduce some stability into a situation now marked by disintegration, chaos, misery, and conflict? It is to this fundamental issue that I now turn.

The Great Plains and the southern Cotton Belt, I have already pointed out, are suffering the dislodgment of their farm people because of various forces, among them drought and mechanization of the farms. Since we are receiving their dispossessed, it is logical and proper that we demand of those areas that they shall put their house in order, and provide the basis for maintaining at home the maximum number of their own people which those regions can support according to an American standard of living. In the Great Plains this means the fullest development of its potential water resources, the proper agricultural practices to conserve moisture, and the proper balance between crops and grass.

In the Cotton Belt more drastic and sustained measures are necessary. In from three to five generations our American ancestors, under the cotton plantation system, have mined the soil of its fertility and even destroyed the topography of its rolling surface. In the Piedmont especially the fields are badly gullied, and large sections of the country which were the most fertile, are almost irretrievably lost to agricultural production. In many sections, the yield of cotton per acre is maintained only by the heavy use of costly chemical fertilizers. If the South is not to dislodge millions of her rural people, she must abandon the one-crop cotton complex, expand animal husbandry, develop a more diversified and self-sustaining agriculture, and undertake upon an even greater scale the conservation and restoration of her depleted soils.

In both the Great Plains and upon the better lands of the Cotton Belt the progress of mechanization is spreading the pattern of the large-scale industrialized farm with which we are so familiar in California. The progress of the machine cannot and should not be halted, but the pattern in which it leaves farm people on the land should not be left to uncontrolled forces if human stability is to be achieved. I shall speak further of this problem shortly when I refer to our own rural structure.

What shall we say about the Great Plains and the Cotton Belt? We should insist that they carry through the reforms of their agricultural structure and practices that their own thoughtful people are urging. We should insist that they carry out the policies indicated in the reports of the Committees on the Great Plains and on Farm Tenancy. The tenancy program, basic to stabilization in the South, has been held in Congress to a snail's pace. Because we receive those who are being dislodged in the South, and face the prospect of receiving more, California should insist that these agricultural reforms go forward. Our State should use its full influence in Washington to ensure adequate national support for the stabilization of the rural structures and peoples of the South and of the Plains.

It may be that deterioration of the soil and over-expansion of agriculture have already gone so far that surplus population in these regions must be squeezed out, even with a program of agricultural reform. Indeed, this is the view of our most careful students. If this be true, we should insist that the advantages of supporting surplus populations in those regions

which produced them, on relief if necessary, be balanced against their opportunities for self-support elsewhere. They should not be cut adrift, or even encouraged to leave by shoddy relief policies at home.

This answer to the question "What can we do to check the stream of refugees?" will be unsatisfactory to Californians, but it seems in accord with the basic facts. If stabilization of the rural population in the South and Great Plains offers little hope of checking the flight of refugees immediately, at least it promises for the long run a balance between population and land which will not easily expel new waves of migrants in the future.

The final question remains: What can we do to so incorporate in the economic life of California those migrants whom we must receive, that the pressing problems of relief, health, housing, and incessant strife may not permanently afflict our agriculture?

Our first thought goes naturally to the land, and to the great reservoirs which the Reclamation Service is building in the West -- Columbia Basin, the Central Valley project, Boulder Dam, and others. If new farms were rapidly being brought under irrigation in the years immediately ahead a ready answer might be at hand. The Columbia Basin project alone will ultimately irrigate 1,200,000 acres of land, or half of the total of land to be irrigated by all 12 of the Reclamation projects in the West. But the Columbia Basin will not be ready for any settlement within 5 years, and the last unit will not be ready for at least 30 years. The United States Commissioner of Reclamation, John C. Page, states of all these projects that "at no time in the next 10 years will we be able to offer for settlement more than 150,000 acres in any one year." This implies that in no year during the next ten will new irrigation provide settlement for more than, say, 2,000 families. The Commissioner dashed effectively the hope that new irrigation will resettle the refugees to the West when he said in January, 1938: "The Columbia Basin project, if it were finished at this time, would provide homes for less than half of the farm families already driven by drought from the Great Plains alone." The frontier is gone, and there are few new lands. If we are to solve our problem, we must solve it upon the lands which we now farm.

We are all familiar with the basic facts of farm organization in California, particularly the large-scale industrialized type which predominates in those areas to which the refugees are attracted. More than one-third of all the large-scale farms of the United States are concentrated in our State. Absentee and corporation ownership are common, hiring and firing practices follow the old industrial pattern, and a roving, landless proletariat provides the shifting peak labor supply upon which the crops depend. Our most acute rural problems are inseparable from this type of agriculture -- destitution, restless workers, incipient labor organization, violent strikes, nervous and scarcely concealed vigilantism. It is the refugees and others now working in this type of agriculture that we mean when we say, "What shall we do with them?"

Our problem is how to introduce stability where there is none. As a first step we can stabilize many of the migrants on small garden plots of ground, adjacent to as much employment as possible, where they can raise a portion of their subsistence, live in a decent house, and keep the children in one school as long as possible. From this base the father and older sons can migrate when necessary. At Arvin in Kern County, 20 of these houses located each on two-thirds of an acre of land, are already occupied by farm laborers' families which rent them for $8.20 a month. The Farm Security Administration has allocated funds for 150 more of these houses in California and has let contracts for 80 of them.

As a second step, we can select some families according to capacity, and stabilize them at a higher level by similarly locating and providing them with low-rental housing, and in addition, equipping them to supply themselves through a cooperative with dairy, poultry, and vegetable products. Units of this type have already been started in California and Arizona.

These two steps will stabilize and elevate the standard of living of the migrants as laborers. But we still hold in this country to the belief that there should be opportunity for those at the bottom to ascend the agricultural ladder. A third step we can take, therefore, is to establish landless farm families as operators on farms. Where land and other conditions are favorable, every advantage should be taken of the economies of machine methods and low overhead through large-scale operation. In the interest of consumer as well as producer, the economies of corporate farming so fully developed in the West should be retained. But instead of resident corporation managers on huge tracts employing hordes of landless laborers, could we not establish large corporate farms operated by resident farmers working cooperatively under competent management, and sharing the proceeds? The Farm Security Administration is now operating a few farms of this type in the West and South. They are aimed not only to give opportunity to farmers who are landless. They are planned to establish a type of farm organization which will produce economically, prevent the deep divisions that now rend our countryside, and introduce stability among those who live from the land.

These measures are suited particularly to the portions of the old South and West, where mechanization and industrialization of agriculture are now producing the greatest human dislocation and turmoil. They should have a major place in the national farm program. The Department of Agriculture must face its full responsibilities.

THE MIGRANTS AND CALIFORNIA'S FUTURE

The trek to California, and the trek in California

By

Dr. Paul S. Taylor, Regional Labor Adviser
Resettlement Administration

Address before Commonwealth Club of California, 1935

A new common refrain has appeared in the headlines of our newspapers. We are told that California is menaced by an "influx of indigents," of "paupers," of "jobless." A Los Angeles 'columnist' cries in alarm: "That 5000 indigents are coming into southern California" ... leaves one appalled. This is the gravest problem before the United States ... these tattered migrations." Lamenting our good roads he adds: "The Chinese, wiser than we, have delayed building a great system of highways for that very reason--to head off these dangerous migrations--indigent people stampeding from the farms into cities to live on charity." In June an aroused state assembly passed a bill to debar from California "indigents and persons likely to become public charges," but cooler counsel prevailed in the Senate and the bill failed to become law.

Interested, but more aloof, the national magazines have taken up the story under the titles "California, here we come," and "Again the covered wagon." And they even ridicule us Californians, as does Walter Davenport in Collier's, that "All this migration of the unemployed" is "a part of (our) reward for all the milk-and-honey ballyhoo (we) had been broadcasting for years. Come live in southern California for the good of your soul, (we) used to sing ... In California, (we) once told them you live life; elsewhere you merely spend it ... 'Even the tears one sheds in California are tears of gladness.'" So effectively have we "sold" our state that out of every five native white Americans now in California, three are literally "immigrants" to this State. Perhaps we Californians, native and "immigrant," can't complain too much that we are the Mecca of the nation, and that even the distressed have heard our praises and our appeals.

Stand today at the highway portals of California; particularly at the southeastern border. See the shiny cars of tourists, the huge trucks of commerce, the equipment of campers, as they roll by. And at intervals the slow-moving and conspicuous cars loaded with the refugees from drought and depression in other states. They travel in old automobiles and light trucks, some of them home-made, and frequently with trailers behind. All their worldly possessions are piled on the car and covered with old canvas or ragged bedding, with perhaps bedsprings atop, a small iron cook-stove on the running board, a battered trunk, lantern, and galvanized iron washtub tied on behind. Children, aunts, grandmothers and a dog are jammed into the car, stretching its capacity incredibly. A neighbor boy sprawls on top of the loaded trailer.

Most of the refugees are in obvious distress. Clothing is sometimes neat and in good condition, particularly if the emigrants left last fall, came via Arizona, and made a little money in the cotton harvest there.

But sometimes it is literally in tatters. At worst, these people lack money even for a California auto license. Asked for the $3 fee, a mother with six children and only $3.40 replied, "That's food for my babies!" She was allowed to proceed without a license.

Are these people riff-raff? Are they the almost unmitigated "moochers" that some declare? Are they an "invading horde of idle," as the newspapers call them? After having seen hundreds of them all the way from Yuma to Marysville, I cannot subscribe to this view. These people are victims of dust storms, of drought which preceded the dust, of protracted depression which preceded the drought. "It seems like God has forsaken us back there in Arkansas," said a former farm-owner at a San Luis Obispo pea-pickers' camp. "The cotton burned up" is their common story. They are largely farmers who have been carrying on agriculture on the family pattern which has been so long regarded as the great source of stability in our nation. One of them, recently picking fruit with his family in the Sacramento Valley, told succinctly this story of his decline from farmer to farm laborer: 1927--made $7,000 as a cotton farmer in Texas; 1928--broke even; 1929--went in the hole; 1930--deeper; 1931--lost everything; 1932--hit the road; 1935--serving the farmers of California as a "fruit tramp."

It is not only despair, but hope that draws the refugees to California, hope of finding work, of keeping off or getting off relief, of maintaining morale, of finding surcease of trouble; yes, and the climate which even the poorest can share. "We haven't had to have no help yet. Lots of 'em have, but we haven't," said Oklahoma pea-pickers on El Camino Real at Mission San Jose. "Relief? I wouldn't have it no way it was fixed." "All I want is a chance to make an honest living."--"When a person's able to work, what's the use of begging? We ain't that kind of people," said elderly pea-pickers near Calipatria.

Of course there are some persons who come to California simply as "touring transients" seeking more and better relief. The announced cessation of transient service relief and the program of the Works Progress Administration are intended to remove inducements to this type. But "transients" are not to be confused with "migrants." The great majority of those in distress who trek to our state avoid entirely or leave as soon as possible the "transient" class, i.e., persons on Federal relief, with residence in another state. They join the "migrants" of California, i.e., persons who seek a living by work, following the crops. When relief is genuinely needed by these people to tide them over, there is usually genuine gratitude. "If it hadn't been for the relief groceries, what would we 'a' done? We think it's awful good in them to give us." But their real temper was expressed by a southwestern refugee encamped as a migrant on a dreary field at Shafter: "So many give up and stayed; they just give up everything. This is a hard life to swallow, but we can't just sit there and look to somebody to feed us."

White Americans predominate among the emigrants. Long, lanky Oklahomans with small heads, blue eyes, an Abe Lincoln cut to the thighs, and surrounded by tow-headed children; bronzed Texans with a drawl, clean-cut features and an aggressive spirit; men and women from Arizona, Arkansas, New Mexico, Missouri, and Kansas.

During the four months ending October 15, more than 30,500 men, women, and children--members of parties "in need of manual employment"--entered California in motor vehicles bearing out-of-state licenses, or probably about six percent of all persons entering in vehicles with out-of-state licenses. Largely they are refugees from drought and depression elsewhere. Thirty-five percent of them came from the three states of Texas, Oklahoma, and Arizona. Many refugees have already returned to the states whence they came, others will return. What the net permanent human deposit from this migration to our state will be, only the future can tell. Riff-raff? Probably no more than in every great migration. The weak are matched by the strong, the hardy, and the adventurous who seek in the west a new hold on life. Indigents? They are poor and in distress and many have had to take relief before they could obtain employment. When they arrive in our fertile valleys, without work or with insufficient work, they are the most ragged, half-starved, forgotten element in our population, needy, the butt of the jibes of those who look down on "pea-pickers" and "fruit tramps," but with a surprising morale in the midst of misery, and a will to work. These people are not hand-picked failures. They are the human materials cruelly dislocated by the processes of social erosion. They have been scattered like the dust of their farms, literally blown out. And they trek into California, these American whites, at the end of a long immigrant line of Chinese, Japanese, Koreans, Negroes, Hindustanis, Mexicans, Filipinos, to serve the crops and farmers of our state.

The catastrophic dislocation of people is always dramatic. It stirs our emotions, and rightly so. We cannot remain unmoved while distress pours into our highways and byways. But in viewing the trek to California of the drought refugees, let us not lose this perspective. Rural migration and the hardship and social instability which it entails, is not new to us, but old. For forty years or more laborers have been moving ceaselessly about our state with the seasons, following the crops. In 1927 the State Department of Education enumerated 37,000 migratory children alone. The best present estimates place the number of men, women, and children who migrate at some time during the year to work in the crops of California at from 150,000 to 200,000. Here lies the major, permanent, and almost unique rural labor problem of California. The drought refugees, merging with the much greater mass of milling hordes which continually moves up and down the valleys of our state, have taken the spotlight, but we Californians know that in the incessant movement of our own migrants center the problems which we must attack. To this perennial phenomenon of our state, I invite your attention for the remainder of this discussion.

Some aspects of the farm labor problem of California have been illuminated rather fully in the forums of our state. You have listened to discussions of the "embattled farmers" and the "communists," and enquired whether the radicals can "capture the farms of California." I do not propose to discuss rural labor in the term of belligerency, of right and wrong, of law, or of patriotism, however defined. I intend rather to invite your consideration of some of the basic economic facts which underlie the agricultural structure and process in our state as they affect labor, and in affecting labor, affect us all.

The history of California agriculture can be written largely in terms of the shift from extensive crops to intensive crops. The dry farms, using mechanical methods of harvesting, which used to fill with grain the holds of sailing ships from all parts of the world, no longer predominate. With irrigation have come intensive crops with heavy demand for hand labor; citrus, grapes, fruit, vegetables, melons, cotton. In 1879 the value of intensive crops represented less than four percent of the total value of California agricultural production. In 1929, only a half-century later, intensive crops represented not four percent, but practically four-fifths of the total, or 78 percent. Here lies the real explanation of the great migrations of the past which have given California its Oriental and Mexican labor populations and of the whiter migration of recent years and months.

Together with the rise of intensive crops is the large scale of the operations by which these crops are produced. The large farm is very prominent in our rural economy, and the large grower, as is well known, exercises great influence in the counsels of agricultural employers. More than one-third of all the large-scale farms in the entire country are located in California. Of all farms in the United States whose product is valued at $30,000 or above, nearly 37 percent are found in our own state. California has within its borders 30 percent of the large-scale cotton farms of the country, 41 percent of the large-scale dairy farms, 44 percent of the large-scale general farms, 53 percent of the large-scale poultry farms, 60 percent of the large-scale truck farms, and 60 percent of the large-scale fruit farms of the United States.

Together with crop intensification and large-scale production organization, have come commercialization of agriculture, higher capitalization, increased production for a cash market, and a high cash expenditure for wage labor. In Mississippi, typical of southern cotton culture, the average cash expenditure per farm for farm labor was only $137 in 1929. In Iowa, typical of the Middle West, the average expenditure was $323. In the United States as a whole, the average was $363 per annum. In California, the average cash expenditure on farm labor, per farm reporting, was $1,438, the highest of any state in the Union, and almost four times the national average.

All these factors--the growth of intensive agriculture, highly capitalized, large-scale farming methods, and concentrated ownership, huge payments to farm labor--together have given us an industrialized agriculture, a system of open-air food factories, it might almost be called. Wage relations are highly developed, gang labor is employed, with foremen and sub-foremen. Elaborate piece rates are set up, with bonus payments. Farmers' agents recruit and distribute laborers. The state maintains labor commissioners who aid rural laborers to collect unpaid wages, just as they aid urban workers. Sporadic efforts are made at collective bargaining.

The rural wage-earning population so created, is, proportionately, the largest rural wage-earning class in any state of the Union. According to the census of 1930, barely 10 percent of all persons gainfully employed in agriculture in Mississippi were paid farm laborers. In the entire United States the percentage of farm laborers was 26. In Iowa it was 27. In California, paid farm laborers constituted 57 percent of all persons gainfully

employed in agriculture. This was more than double the national average, and was the highest proportion of paid farm laborers in any state. In other words of all persons gainfully engaged in agriculture--owners, tenants, managers, laborers--only one in ten were paid laborers in Mississippi, and one in four in the United States. But in California more than half were paid laborers.

By reason of the intensification of our agriculture, then, and the economic structure which developed it, we have built up in our midst a rural proletariat, if you will, largely of alien race, propertyless, and without ties, protective or otherwise, to the soil which they till. We have deviated far from the American homestead pattern of the family farm, which survives in many parts of the country and in our national ideals.

Not only is our agricultural labor class large; it is also highly mobile, living a large part of the year almost literally "on wheels." The automobiles of the laborers are not luxuries. To even the poorest they are vital necessities of life. And the cost of their operation and upkeep cuts a large figure in the family budget. The car must be fed gasoline and oil to make the next harvest, or to get to and from the fields, and its wheels must be kept shod more carefully than the feet of the children. "The way the world's on wheels now, you've got to have gas and eats, and we don't get no more," said migrants at Marysville.

From Imperial Valley the migrants follow the harvest to the San Joaquin, Santa Clara, and Sacramento Valleys, a distance of from 360 to 550 miles each way by air line, and much longer by road. Within each valley they move about, from camp to field, field to camp, and ranch to ranch. During August, 1927, 11,500 Mexican laborers and their families, or a sustained daily average of 370, were counted moving north by motor vehicle over the Ridge Route to the San Joaquin Valley. Many more moved than were counted.

California migrants work also in other states: the Hood River and Yakima Valleys of Oregon and Washington, the Arkansas Valley of Colorado, the Salt River Valley of Arizona. In August, Mexicans from California harvested the pea fields of Idaho. During the two months ending October 15, 7,600 California men, women, and children, migrants "in need of manual employment," returned to our state by motor vehicle. This number was almost one-fourth as great as the entries during the same period of needy workers and their familie in cars bearing out-of-state licenses.

The life of the migrants is hard. It is not a successions of vacation camping trips. Employment is intermittent, jobs are often precarious, and annual income is low. "We like to work and not just set around. I'd rather do anything but set around, but they just ain't no chance here in California, seems like," said a Kern County migrant last spring. "Livin'? It's kind of sorry. You work a while, then lay up a little, then go broke, and then move." "You wait for work two weeks," then "fight like flies for the work." "You eat it up faster than you can make it." A common estimate among employers and observers, of the average annual earnings of migrants is between $350 and $400.

Incessant migration retards the education of children. A few American parents are beginning to complain that their children cannot write as good English as they. There is growing conscicusness that for many of their kind the future portends not progress from generation to generation, but retrogression. "These days people can't raise children as good as themselves," said a fruit tramp at Winters. "My children ain't raised decent like I was raised by my father. There was no 'rag houses' then ... but I can't make it," was the cry of a cherry picker.

The development of normal relationships between citizen and community, and between employer and employee, is not favored by constant movement. "My father was a track foreman at $1.25 a day, but we lived in a house and everybody knew us," said a fruit tramp. "This rancher has us for two or three weeks, and then he's through with me. He knows me till he's through with me." "Residenters" look askance at the nomads, and treat them as "outlanders." Children are stigmatized at school as "pea pickers."

Migrants are homeless, and at the mercy of whatever quarters may be available. In the increase of squatters' camps by the roadside, in the creek bottoms, or "no man's land," depression has dealt them a heavy blow. The California Division of Immigration and Housing describes these social pockmarks:

> "Groups of persons arrive at any given community and start a camp. No provision is made for sanitation, water supply, or even general camp cleanliness. Such housing accommodations as they may have is eked out by wood, tin, or such cast-off material as can be obtained in the vicinity. A sorry picture is presented of a condition that threatens to be a serious menace to those communities where squatter camps exist. Moving the occupants away simply spreads the condition and local authorities are loath to act against people who came there in the hope of securing some employment. The division's attention has been called to a number of these squatter camps during the last winter, but has no legal authority to take remedial steps..."

At a Sacramento Valley squatters' camp there were only two privies, both filthy, for 500 people, and the water supply was contaminated. At a camp in Kern County, water was obtained only from the nearest service station, at 5 cents a bucket. The United States Special Commission on Agricultural Labor Disturbances in Imperial Valley in its report dated February 11, 1934, stated:

> "Living and sanitary conditions are a serious and irritating factor in the unrest we found in the Imperial Valley. We visited the quarters of the cities where live Mexicans, Negroes, and others. We inspected the temporary camps of the pea-pickers, and know that they are similar to the camps that will serve as places of abode for workers in the fields when melons are gathered. This report must state that we found filth, squalor, an entire absence of sanitation, and a crowding of human beings

into totally inadequate tents or crude structures built of boards, weeds and anything that was found at hand to give a pitiful semblance of a home at its worst. Words cannot describe some of the conditions we saw. During the warm weather, when the temperature rises considerably above 100 degrees, the flies and insects become a pest, the children are fretful, the attitude of some of the parents can be imagined, and innumerable inconveniences add to the general discomfort. In this environment there is bred a social sullenness that is to be deplored, but which can be understood by those who have viewed the scenes that violate all the recognized standards of living ... It is horrible that children are reared in an environment as pitiable as that which we saw in more than one locality."

For more than a score of years the state camp inspectors of the Division of Immigration and Housing have done yeoman work. Struggling against the obstacles of public apathy, inadequate staffs, resistance of employers unwilling or unable to do better, reluctance of local officials to apply penalties to their neighbors for violation of state camp sanitation laws, they have sought ceaselessly to attain better conditions by enforcement and by education. Some ranchers, notably larger farmers with long crop seasons, have been fully cognizant of the need, and have established good labor camps.

But even after all the efforts by enlightened and financially capable employers, and by state camp inspectors, the living conditions of scores of thousands of men, women, and children are actually growing worse, as the increase of squatters' camps plainly demonstrates. The situation has got beyond finding someone to blame. Smaller farmers are financially unable to provide for the numerous workers and their families whose services they require only two or three weeks a year. And the squatters' camps, not located on the land of the employer, are not subject to the jurisdiction of state inspectors. If inspectors bring too much pressure to raise ranch camp standards, the farmer may refuse to house his laborers at all. In that event, their only recourse is to a squatter's camp, worse even than the camp of the farmer. Then they have sunk to the bottom, where human deterioration is inevitable. As a squatter said, "Livin' a bum's life soon makes a bum out of you. You get started and you can't stop."

The hand of government should be extended to ameliorate the hardships of our largest agricultural group. Acting on this belief, the State Division of Rural Rehabilitation of the Federal Resettlement Administration, under direction of Harry Drobish, has engaged in study of the problem and has conferred with interested persons of all shades of opinion. The Division is now conducting two experimental camps for migrants, one at Marysville, the other in Kern County. Both have been constructed with cooperation from the State Emergency Relief Administration, and upon express invitation from, and with generous financial cooperation of the local authorities. The camps provide minimum decencies for migrants: healthful site, pure water supply, sanitary toilets and garbage disposal, shower baths with hot and cold water, and

simple laundry facilities. Competent supervision will insure observance of reasonable regulations for maintenance of sanitation and order. It will provide leadership for recreational and cultural programs for adults and the children.

Friends of the effort to eliminate squatters' camps have felt some apprehension lest under the tension which prevails, large growers or vigilante groups might oppose establishment of decent public camps for migrants. To a very limited extent this may be true, but the attitude of the smaller farmers and many of the large growers is distinctly friendly. At the Marysville camp, large and small growers and townsfolk have alike welcomed the camp, declaring it a measure of public welfare, and a boon to growers, to migrant workers, and to business.

Decent camps are not a palliative, for they are necessary to meet a permanent characteristic of California agriculture which demands mobile, seasonal labor. Nor do they induce excessive mobility. Migrant camps neither extend relief, nor will a chain of them alter the distribution of the relief load among counties. They simply make it possible for those who do migrate in search of work to move from one decent camp to another, instead of from one wretched camp to another.

The State Division of the Resettlement Administration is now considering the erection of from 15 to 20 more camps with Federal aid, and it welcomes public support. As a second step, the Resettlement Administration is considering a plan to establish selected laborers and farmers who have lost their farms, on small plots of good land with decent homes, in order to provide greater stability, and a chance to regain full economic independence. As part of a broader program of rehabilitation and resettlement, therefore, migrant camps have unique value. Not only do they contribute to the abolition of squatter camps; they serve also as reservoirs from which distressed farm people can be filtered upward and selectively re-established on part-time farms, as tenants, and even assisted back to the ranks of farm owners. Thus for some, camps will constitute a first rung in a reconstructed agricultural ladder, which they can ascend in traditional American fashion according to their abilities.

In the interest of laborers, growers, and the public, alike, it is imperative that measures be taken. It will not do to argue that the migrants are a low class, unworthy and incapable of improvement, or that many are aliens. Without resorting to sound sociological generalizations, it is easy to see that large numbers of migrants have lived far better in the recent past than now. "We ain't the chasin' around kind. Never did this before," said migrants in the southern San Joaquin Valley. A Federal conciliator points out: "It may be true that alien Mexicans ... live better in Imperial Valley than they do in their own country, but this cannot constitute an excuse for countenancing poverty and squalor in the United States." At Marysville one hears, "Tain't hardly fair. They holler that we ain't citizens, but their fruit would rot if we didn't come."

It is not sufficient to cry "move on." Last fall, at the conclusion of the pea harvest, the supervisors of a coast county voted $2500 to fill the tanks of the pickers' cars with gasoline enough to get them into the next county, to avoid having to feed them. The receiving county, resentful, sent word that if there is a repetition, the migrants will be turned back at the county line with guns.

Nor is it a solution simply to urge "stay put; don't migrate." The anachronistic laws which limit the right to receive relief to residents of the county, seek to stop movement between counties; our own state assembly has just approved barriers to inter-state migration. "Because we went out and tried to make a livin', the relief turned us down," said a migrant at Bakersfield. "Now they're telling 'em there's work out there so why don't we go." And a fruit tramp at Winters added, "But my boys are American citizens. If war was declared, they'd have to fight, no matter where they was. I don't see why we can't be citizens because we move around with the fruit trying to make a living." Along the roadside near San Jose a migrant who had seen good days was perplexed: "Lots of farmers in Oregon and Washington don't want you if you have a California license. Under the Constitution you should be allowed to move. But the relief rules say 'don't move'. If you're going to be a fruit tramp you have to move. If we can't go into a state without having so many hundred dollars, there's no hope."

We must not be content with specious solutions, whether barriers or aids to movement. We cannot fail to act because the migrants are a depressed class, or because they are not citizens of our county, state, or nation. They serve our crops and our farmers, who need their good will. They come here at our invitation, expressed or implied. Their numerous children are citizens of the future whose quality is being determined today in the squatters' camps which litter our state.

The migrants and California's future? The answer lies in how we deal with major problems in the present. The trek of drought and depression refugees to California is the result of a national catastrophe. The succor of its victims is a national responsibility.

The plight of the migrants who follow the crops of our own state touches all Californians, and is our responsibility first. Today mobility is excessive. Its social cost is great. Measures to increase stability, without loss of economic freedom, are needed. And they will be welcomed by the migrants.

The prompt elimination of squatter camp conditions is vital to the interests of all. Squatters' camps are a menace to public health, to social health, and to good labor relations in agriculture. They are a fertile source of discontent, breeders of grievances and feeders of unrest. Their existence is a challenge to our society. They can be abolished.

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SOCIAL PROBLEMS OF AGRICULTURE IN WARTIME 1/

By Paul S. Taylor

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A year ago in the Yale Review a past President of the American Farm Economic Association set down words of serious import to agriculture.

> "The key to the direct and effective handling of the interrelated problem of capital and labor by farmer or handicraftsman," said Edwin Nourse of Brookings Institution, "is to be found in the fact that here the responsibility for the labor force and for the capital fund is one and indivisible. The same individual is capitalist, manager, and laborer. In our modern practice of private capitalism and free enterprise the trend has been, in large measure, to divest those who administer the capital fund from responsibility for the employment and material well-being of the labor force as a whole. When this tendency goes far enough the two parts of the economic process fall apart and its functional integrity is lost." 2/

This quotation -- not withstanding that no longer can we say truly of American farming that "the responsibility for the labor force and for the capital fund is one and indivisible" -- will serve as our text for deliberating over some of the social problems of agriculture in relation to war.

In the midst of a situation which calls for, and has so many of the elements of national unity, common effort, and a wide dispersal of sacrifice and reward, it may seem at first glance that examination of what Nourse calls loss of "functional integrity" is dragging something in by the heels. It is true that agriculture as a whole sustains a prosperity that has been denied it for many a long year, and that some of the marks of depression and strife are being wiped from its face. Agricultural income, which stood at the low point of four and three quarters billion dollars in 1932, when the nation wholeheartedly and in alarm stepped in to rescue the American farmer, has been raised to nearly fifteen and one half billion dollars in 1942. 3/ The net income of farm operators, based at 100 in the five-year period 1910-1914, stood at 282 in 1942, and the net income from agriculture per person on farms at 289, the highest by far in any year of the government record which stretches over more than thirty years. Of course, the problems and vexations of farm management are intensified in wartime, and many operators are harassed by irritating difficulties over priority restrictions on

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1/ Paper read at the meeting of the Western Farm Economics Association. Berkeley, California. June 24, 25, and 26, 1943.

2/ Nourse, Edwin. Democracy as a principle of business. Yale Review, Spring, 1942. p. 473-474.

3/ United States Department of Agriculture, Bureau of Agricultural Economics. Net farm income and income parity summaries. Washington, D. C. February, 1943. (Mimeo.)

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machinery and materials, and by limited supplies of experienced labor. Yet no one who recalls the depths of depression in the thirties, when net income from agriculture per person on farms which now stands at 289, stood at 55, and when despite the AAA and other relieving programs, the Works Progress Administration reported that 5 per cent of all farm operators were on relief, and 11.6 per cent of all farm laborers -- no one who recalls this can but find satisfaction that in wartime has come a respite if not an end to agricultural distress of that degree and kind.

And yet the prosperous appearances of wartime agriculture cannot obscure some startling evidences that this industry is not as whole and united as it might seem. Far from maintaining intact the handicraft character that Nourse still ascribes to it, in which typically "the same individual is capitalist, manager, and laborer," agriculture, under stress of war, is showing disturbing evidences of that loss of "functional integrity" which the Brookings economist sees so clearly and regretfully in business and industry in "our modern practice of private capitalism and free enterprise."

During the last decade the most visible evidences that farm people were beginning to recognize a growing division of function in agriculture between employer and employee, came from those who found themselves cast in the role of employees. Their recognition was in the form of a series of bitter strikes, and of attempts to unionize led variously by communists, independents, C.I.O., and A.F.L. which on the whole were unsuccessful. Naturally this provoked counter-organization by agricultural employers. With the coming of war it is agricultural employers who now show the more conspicuous recognition that the employee function has passed to someone else, and that they themselves have become employers.

An important connotation of the "functional integrity" cherished by Nourse is, we may assume, that benefits to one part of our agricultural population are participated in by the rest of it to more or less the same degree. To some extent this occurs in wartime but it is clear also that there are serious disparities. From a low point of 85 in 1933 the index of farm wage rates rose to 214 in October 1942. Based on the same years, 1910-1914, the index of net income of farm operators stood at 282, or 32 per cent higher. Since the indexes of employment of family workers, and of hired workers were nearly the same in 1942, it may be assumed in the absence of closer analysis that the 1942 financial participation in wartime agricultural income by hired laborers, and by operators and their families, was roughly in the same unequal proportions as these indexes 214 and 282 suggest. If we shift the basis of our comparison from 1910-1914 to 1939, in order to obtain a closer check on wartime changes to 1942, it appears that the total net income to farm operators increased by 128 per cent in three years while the farm wage rate to laborers on farms increased only 75 per cent.

There is clear evidence that the wartime gains of migratory agricultural laborers in the West are more substantial than these national figures suggest. These workers have been twice gainers from the wartime contraction of labor supply. They benefit from the advance in wage rates and again from the increased employment available to them. A recent study of the change in earnings between 1940 and 1942 of migratory families quartered in Arizona and California camps operated by the Farm Security Administration shows a gain in employment of 2.7 times, in average daily earnings of 1.9 times, and in average weekly earnings of 5.1 times. The more casual the prior employment, naturally the greater the benefit.

The results of this study are full of meaning for us in the West. Farm employers who remember the strife of the thirties engendered by the presence of a

large surplus of underemployed laborers whose very underemployment drove them to demand higher wage rates than their more fully-employed colleagues could afford, and were willing to accept -- farm employers who remember this will see advantages to themselves as well as to their laborers, without the cost of higher wage rates, in a program to decasualize farm labor. Is there any good reason why more laborers than can obtain a decent living from agriculture, or from a reasonable combination of employments, should be engaged in agriculture at any time? Is this not a point at which we may well commence restoration of the functional integrity of agriculture?

Every student of the distress of farm people in the 1930's remembers on maps showing relief load the massing of black in the Appalachian-Ozark and Lake States-cutover areas and in the Southeast generally. The National Resources Committee has projected onto a map the differing "values of farm land per capita of farm population." These maps, respectively, of distress and of long-existing differentials in economic opportunity for American farm people show substantial correlation. The facts are incontrovertible.

In October, 1942, Dr. Conrad Taeuber of the Department of Agriculture laid these facts before a Senate Subcommittee investigating manpower resources in wartime. Summing up Taeuber's expert testimony, Senator Pepper of Florida said:

> "... it may be that this period is the godsend to that area. In other words, it may be that this time when it is important to utilize to the maximum all the manpower that we have, is the time when we should begin to solve that problem of concentration right there, of people who are not contributing as much as they should contribute to the country, and at the same time to get their greatest contribution to the war, and at at the same time to offer the most permanent solution for their problem." 4/

The most concrete means for stimulating this redistribution of farm people to the permanent national advantage is the wartime redistribution of farm laborers within the United States. It is the wartime interest of western agricultural employers in particular to utilize workers from substandard areas in our own country. In those very areas of substandard living, however, farm employers oppose any substantial movement of less fortunate farm people to areas of greater economic opportunity, and have persuaded Congress to accept their view. An amendment by Congressman Face of Georgia to the Farm Labor Act was adopted which provides that no government funds shall be used to transport farm workers "without the prior consent in writing of the County Extension Agent." The following interrogation of a public official by Congressman Tarver, also of Georgia, on the point raised by Dr. Taeuber, hardly conceals the desire of southern agricultural employers to retain a surplus of laborers at home and their unwillingness to release them to other areas:

> "You said something yesterday about some workers being engaged in agriculture on farms that were unproductive and whose services could better be utilized on more fertile farms.

4/ Subcommittee on Manpower Resources of the Senate Committee on Education and Labor. 77th Congress, 2nd session. Hearings, Part 1, p. 17.

"Now, you are aware, of course, that for some years we have had theorists in this country who entertained the idea that the fathers and grandfathers and great-grandfathers of certain people in the South had made a mistake in locating in that section of the country; that they were on poor land and their educational facilities were not what they should be, and that their interests would best be served by convincing them the thing to do would be to move off of these poor and nonproductive lands in localities which did not measure up to the aesthetic ideas of those theorists and emigrate to other sections of the country and become employed on more fertile farms as hired hands.
"I am just wondering to what extent you are trying to carry into effect that sort of a program?" 5/

In this contemptuous fashion Congressmen, acting under pressure from one section of farm people, have just brushed aside painstaking and cumulative searches by professional economists and sociologists who for years have sought measures to utilize the labors and to ameliorate the conditions of millions of other farm people.

Not only has this farm labor law lost for American farm people what probably is their best chance, for an indefinite future, to obtain a sensible redistribution with respect to economic opportunity. The law violates the first principle of decasualization of the labor market enunciated clearly thirty years ago by Sir William Beveridge, namely, to establish one common labor reservoir, and one only. The Farm Labor Law, by giving County Agents a veto power, confronts us with the prospect of up to three thousand independent county reservoirs. The administrator of Food Production, Chester Davis, was aware of this, and some senators.

"It would be possible for the county agent, due to local pressure, to refuse to release the labor to some place where it was more urgently needed," asked Senator Tydings; "isn't that a fair deduction?" "I think it is, Senator," replied Davis, " ... it seems to me it would work to prevent the flexibility and mobility of the labor you need to do the job." 6/

These protests were in vain.

It is clear from the recorded statements of those agricultural employers whose influence shaped the Farm Labor Law that the generalization applied by Nourse to developing industry, fits also the current activities of the most influential employing groups in agriculture, namely, that "the trend has been in large measure to divest those who administer the capital fund from responsibility for the employment and material well-being of the labor force as a whole." Agricultural employers have sought and obtained virtually unhampered control over the recruitment and transportation of their labor force. At the same time their representatives before Congress rejected emphatically measures to accept some responsibility through law for "the employment and material well-being of the labor force as a whole." Thus, the head of one farm group demanded that Congress forbid the Secretary of Agriculture to "fix, regulate, or impose minimum wages or housing standards" for farm labor. The House

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5/ Subcommittee of House Committee on Appropriations. 78th Congress, 1st session. Hearing on Agriculture Department Appropriation for 1944. p. 1005.

6/ Subcommittee of the Senate Committee on Appropriations. 78th Congress, 1st session. Hearings on Farm Labor Program, 1943. p. 264.

Committee on Appropriations, with a gesture of "regrets," complied, and Congress itself acquiesced. The opposition of farm organizations to any extension to their employees of legal protections long accepted in industry continues with unabated vigor and success. The resemblance of this attitude of agricultural employers to that of industrial employers of an earlier era will not escape the notice of those familiar with economic history. Perhaps this unwillingness to extend public benefits to its employees is no more than the natural accompaniment of the earlier stages of the industrial revolution in agriculture, an attitude which maturity will change.

Final evidence, if any were needed, that the functional integrity of agriculture is in the process of becoming lost, lies in the public record of farm organizations on current agricultural policy. The gaping division is not simply between farm employers and farm laborers -- it has opened wide fissures between organizations of farmers. Not many weeks ago the journal of one farmers' organization attacked a second farmers' organization in this language: "Fattened farm fortunates now want underemployed majority choked off." The occasion for this attack was the refusal of the second farmers' organization to support -- indeed its opposition to -- a government production program through Farm Security Administration loans to small farmers. When differences between the organizations of farmers have reached this pitch, the division which the past president of our national association feared surely has arrived. Can it be that the most influential farm organizations really will choose to maintain a course which other organized farmers regard as a rejection of responsibility for millions of farm people? By a proviso inserted on the demand of representatives of a farm organization, the Bureau of Agricultural Economics is forbidden to use any of its funds in 1943 "for State and County Land-Use Planning." For what good reason, one wonders, should a farmers' organization seek to restrict the attempts of Government to view local problems of farm people as a whole, and, through its professional men to carry study and education to all strata of our farm people?

The efforts of men of our profession -- along with officials and men of other professions -- to analyze and to propose solutions to our agricultural problems are beginning to face a peculiar kind of opposition at such times as these analyses do not support the deeply held convictions of groups with special interests at stake. For example, a committee of the United States Senate recently listened to this testimony:

> "... can anybody tell me why these mildewed braintrusters, these so-called social reformers, cannot throw their pet hobbies aside and say that we have got a war to win? They always meet with us and talk about housing conditions and baths and showers -- they tell us we have got to have bathtubs. Well, since we cannot get the priority for a handful of nails in order to repair some boxes, from where are we going to get those bathtubs? ... And yet you stand here and talk to us about this nonsense of social reformers.
>
> "I am telling you, they are twisted minds. I don't care if they are giants in literature, I don't care if they are professors of economics; the time has come when these crackpots have got to leave California farmers alone. Otherwise, not only our civilian population, but our boys at the front who are giving their precious lives, will have empty bellies, and it is the duty of the Congress to carry this mandate to the proper places so that an end can be placed to these destructive statements of the so-called social reformers. They are not social reformers,

they are peddlers of bunk, and I hope they will hear me and understand." 7/

The testimony was received by the Committee, the record says, as a "very helpful, highly intelligent, and eloquent review" of the situation.

If you think this kind of attack is isolated -- it is unusually frank - I suggest a wider acquaintance with recent records of the conduct of the public business in order to obtain fuller understanding of the temper in which issues of these critical times are being resolved. These issues concern the kind of problem to the solution of which most of you are dedicating your professional lives.

Your profession is founded on a belief that truth can be arrived at by diligent, skillful, and intellectually honest search. You expect to submit your results and opinions to the critical challenge of others, to stand or fall on thei merits. If you are called upon to face challenges on the plane of those I have quoted, which certainly are not in the spirit and tradition of your profession, perhaps you will be reminded of something not uncommon a generation or more ago, the opposition of American farmers to "book-learning." Is this the manner in which the results of the most thoughtful work of men like Dr. Taeuber, Frank Lorime Carter Goodrich, Rupert Vance, John Black, and others well known to you are to be weighed? Perhaps, in the heat of controversies it is. Perhaps this, too, is simply more evidence that agriculture is in danger of losing its functional integrity its sense of responsibility to all its own people.

7/ Special Senate Committee to investigate farm labor conditions in the West. 77th Congress, 2nd session, part 2. p. 246.

From LaFollette Committee Report
76 Congress, 2 sess., S. Report 1150, pt.3

Chapter 1. The Pattern of Early Land Settlement and Use Through 1870

Early Spanish and Mexican colonial agriculture in California was marked by the creation of a pattern of land settlement and use which is still characteristic of much of California agriculture. That pattern is the ownership and cultivation of land in large tracts, worked by gang labor. The early Spanish and Mexican grantees used a primitive Indian labor to establish a type of farming in which a disproportionate share of the benefits of the enterprise went to the few individuals who owned the land and directed its use.

An historical analysis of this early period of Spanish and Mexican agriculture is included in a study entitled "The Supply of Agricultural Labor as a Factor in the Evolution of Farm Organization in California."[2] It is the principal basis for the summary that follows.

When efforts at colonization through some twenty-odd Spanish missions did not establish any substantial civilian population in California, the political rulers sought to stimulate independent private enterprise and civilian colonization by making private land grants. These Spanish land grants became a significant institution. Some 23 grants were made before the end of the Spanish regime in 1822, and 13 additional grants were made by the succeeding Mexican Government before 1833. The years 1833–46 saw a large proportion of the most valuable farm land in California pass from the public domain into private hands in the form of some 428 grants, ranging from 4,000 acres to 300,000 acres. These grants were spotted primarily along the coast, with concentrations at San Diego, Los Angeles, Santa Barbara, Monterey, and around San Francisco Bay. There were a few in the San Joaquin Valley.

These grants were chiefly devoted to grazing livestock, and the native Indian population became vaqueros and pastores. Grains, fruits, and vegetables were produced in limited volume for local consumption, hides and tallows being the primary exportable products.

The grantees usually came from a section of the Spanish population which was unaccustomed and disinclined to perform heavy manual work. They sought a ready labor supply in the native Indian population which had been trained under the mission system. In the relatively short period between 1833 and 1846 this labor force was practically impressed into service. Impressment for alleged crime, debt peonage, and an occasional resort to outside seizure and force have been alluded to by various historians as the means employed for maintaining the labor supply.[3]

This system of cultivation, with the population available, did not develop stability and its outlines faded from the scene after the transfer of California to the United States in 1848. The monopolistic pattern

[2] See pt. 54, exhibit 8762-A, pp. 19777–19878. The author of this study is Dr. Varden Fuller, associate agricultural economist of the U. S. Bureau of Agricultural Economics.
[3] Id., pp. 19789–19790.

of land settlement and ownership was, however, carried foward under the new regime.

The status of laborers on the land was one of the first public issues to arise after the cession of California to the United States. Yet this issue did not primarily concern the impressed Indian laborer. Rather it was an echo of the battle between contending forces of the North and South, involved in a bitter dispute as to whether or not the plantation system of the South would be permitted to encroach further upon the rising tide of American economic democracy. While minor skirmishes involving the practice of impressment of Indian labor were reported,[4] the debate was largely addressed to the transplanting of the slave system of the old South to California. The series of efforts to open California to slavery was unsuccessful.

Perhaps the more significant counterpart of the struggle on the national scene was a long period of agitation for a more democratic land-settlement system which culminated in the passage of the Homestead Act of 1862. Broadly, the Homestead Act provided for the establishment of a pattern of land settlement which would prevent the monopolization of the public domain by a relatively few large landholders. The technique adopted for this purpose was the opening of the public domain to settlement on a free-land basis in relatively small units by those who would occupy and operate these lands as working farmer-owners.

Whatever effect the Homestead Act may have had upon the development of agricultural patterns in other sections of the country, the settlement of California proceeded with but slight conformity to the intentions of its proponents. Recently a commentator summarized the workings of the land laws in the early period of development:

> Land monopolization in California dates back to the Spanish and Mexican periods when large grants were made to favored individuals. After investigation by an American commission, 588 of these claims amounting to 8,850,143 acres, or an average of 15,051 acres each, were confirmed. Following 1848 there came a rapid influx of settlers which, together with the large profits realized from the grazing industry in the interior valleys, created a land boom and led to extensive purchases. With great areas of land in the San Joaquin and Sacramento valleys open to cash purchase the opportunity for speculative profits was unparalleled elsewhere; nor was the opportunity neglected. From 1862 to 1880 land sales and warrant and scrip entries in California were on an enormous scale, surpassing all other states for the period and in some years comprising well over half of the sales for the entire country. In the single year, ending June 30, 1869, 1,726,794 acres were sold in this state by the Federal government, and for the entire period from 1862 to 1880 well over 7,000,000 acres were entered with cash, warrants, or scrip. It should also be remembered that the State of California which received 8,126,380 acres from the Federal government was disposing of its most valuable holdings at this time.
>
> Greatest of all the speculators operating in California was William S. Chapman, whose political influence stretched from Sacramento to St. Paul, Minnesota, and Washington, D. C. Of him it was said, with apparent justice, that land officers, judges, local legislators, officials in the Department of the Interior, and even higher dignitaries were ready and anxious to do him favors, frequently of no mean significance. Between 1868 and 1871 Chapman entered at the Federal land offices approximately 650,000 acres of land in California and Nevada with cash, scrip, and warrants. At the same time he entered additional land through dummy entrymen, purchased many thousands of acres of "swamp" lands from the State of California, and otherwise added to his possessions till they totaled over 1,000,000 acres. Fraud, bribery, false swearing, forgery, and other crimes were charged against him but he passed them off with little trouble. The most remarkable

[4] Id., pp. 19792-19793.

feature about his vast acquisitions is that when plotted on a land-use map today they appear to be among the choicest of the lands. Chapman was not able to retain this vast empire for long. He became deeply involved in a grand canal project and eventually lost his lands, many of them going to a more constructive but equally spectacular land plunger, Henry Miller.

Miller, unlike Chapman, bought lands for his cattle business which was his main interest. As the activities of his firm—Miller and Lux, of which he was the chief promoter—expanded, he pushed its land acquisitions until they mounted to over a million acres. One hundred and eighty-one thousand acres of this amount were acquired directly from the Federal government, with cash, Agricultural College scrip, and military warrants; large amounts were purchased from Chapman and other big land speculators and from the State of California. Miller's lands were slowly irrigated, parts were disposed of to small farmers, and upon them today exists a veritable agricultural empire.

Other large purchasers of land in California were Isaac Friedlander, E. H. Miller, and John W. Mitchell, who acquired 214,000, 105,000 and 78,000 acres respectively. The total amount purchased from the Federal government by Chapman, Miller and Lux, Friedlander, E. H. Miller, and Mitchell was one and a quarter million acres. Forty-three other large purchasers acquired 905,000 acres of land in the sixties in California. Buying in advance of settlement, these men were virtually thwarting the Homestead Law in California where, because of the enormous monopolization above outlined, homesteaders later were able to find little good land.[4]

The author just quoted mentioned the confirmation of Spanish and Mexican land grants in the amount of 8,850,143 acres, the granting of 8,426,380 acres to the State of California, and the entry of more than 7,000,000 acres with cash, warrants or scrip prior to 1880. Lands finally patented in grants in aid of railroad construction in California, the bulk of which were made during this early period, amounted in all to 11,458,212 acres.[6] Taken all together, these transfers of land amounted to approximately 35¾ million acres of land, or well over a third of the total area of the State.

By 1905 there was a total of nearly 45,000,000 acres of land in non-Federal ownership in California,[7] including virtually the entire area now in farms with the exception of a few relatively small sections which subsequently were developed by irrigation. The figures cited in the paragraph above fail to account for approximately 9,000,000 acres of land. These were entered in part with cash, warrants or scrip subsequent to 1880, some under the Desert Land Act and the Timber and Stone Act, and others under the provisions of the Homestead Act. It is not possible to determine with accuracy what proportion of the latter was entered by bona fide homesteaders, and what proportion was entered fraudulently. Paul Wallace Gates mentioned the fraudulent entries made by one early plunger through the device of dummy entrymen[8] and unquestionably this and other practices of dubious legality occurred on a widespread scale. The report of the Commission on Public Lands, submitted to Congress by the President on February 13, 1905, stated:

> Detailed study of the practical operation of the present land laws, particularly of the desert-land act and the commutation clause of the homestead act, shows that their tendency far too often is to bring about land monopoly rather than to multiply small holdings by actual settlers. The land laws, decisions, and practices have become so complicated that the settler is at a marked disadvantage in comparison with the shrewd business man who aims to acquire large properties. Not infrequently their effect is to put a premium on perjury and dishonest methods in the acquisition of land. It is apparent, in consequence, that in very many

[4] Gates, Paul Wallace, "The Homestead Law in an Incongruous Land System," American Historical Review, July 1936, pp. 668–669.
[6] General Land Office, Information Bulletin, 1939 series, No. 5, 1940, p. V.
[7] Quoted in annual report of the Commissioner of the General Land Office, June 30, 1905.
[8] Gates, op. cit., pp. 668–669.

[illegible]ties, and perhaps in general, a larger proportion of the public land is passing into the hands of speculators and corporations than into those of actual settlers who are making homes.

* * * * * * *

* * * Nearly everywhere the large landowner has succeeded in monopolizing the best tracts, whether of timber or agricultural land. * * *

Your Commission has had inquiries made as to how a number of estates, selected haphazard, have been acquired. Almost without exception collusion or evasion of the letter and spirit of the land laws was involved. It is not necessarily to be inferred that the present owners of these estates were dishonest, but the fact remains that their holdings were acquired or consolidated by practices which can not be defended.[9]

It is apparent, without further elaboration, that only a very small acreage of land in California was entered by bona fide homesteaders, in comparison to the acreage entered by other means. This circumstance resulted in the monopolization of much of the land in the State in immense holdings which, not without justice, gave rise to the characterization of the large landowners as the "land barons." The report of the Commission on Public Lands viewed this development in these terms:

There exists and is spreading in the West a tenant or hired-labor system which not only represents a relatively low industrial development, but whose further extension carries with it a most serious threat. Politically, socially, and economically this system is indefensible. Had the land laws been effective and effectually enforced its growth would have been impossible.[10]

Thus the pattern of land settlement, established in the Spanish and Mexican periods, was carried over into the American regime in California between 1850 and 1870. This concentrated landownership did not preclude the possibility of the development of a system of operation and subdivision which would have been in conformity with the working family-farmer concept that was the more usual development in other sections of the country. It did, however, provide the framework for the development of large-scale agriculture which has, in fact, continued to develop. As the available statistics of the period show, these large units, when brought under cultivation, were worked by wage laborers. Only to a limited extent did the large landowners in California operate their holdings through tenants.[11]

The most spectacular development in California agriculture from an operating standpoint, following the cession to the United States, was the development of large-scale wheat farms. These grain farms developed as livestock operations were curtailed under the impact of the droughts of 1862–1864. Farms as large as 20 to 40 thousand acres were established, because availability of land in large parcels and evenness of topography permitted an efficient use of large-scale equipment. This development was not only large scale but specialized and speculative.

The method of cultivation was characterized by a rapid advance from primitive instruments to the use of types of machines which were the forerunners of the modern machine sower, multishared plow, and the combine harvester. In this sense, the wheat farms of early California agriculture, together with their counterparts in the Great Plains area, stand as an early example of the impact of mechanization

[illegible] in annual report of the Commissioner of the General Land Office, June 30, 1905, p. 51.

[illegible] p. 52.

[illegible] 1880, the first year for which data are available, 19.8 percent of all farms in the State, or a total of [illegible] farms, were operated by tenants (U. S. Census of Agriculture, 1930, vol. IV, p. 222). On the other [illegible] nearly as 1870 a total of 16,231 farm laborers were reported and in 1880 the number of laborers had [illegible] 21,856; see pt. 54, exhibit 8762-A, table 33, p. 19888.

on agriculture and agricultural labor. The development of mechanized sowing and plowing confined the great peaks of labor demand to the harvesting season since the combine harvester was not perfected for use until after 1880.[12] Between the periods of planting and harvesting there was little to require the attention and effort of the farm laborers.

Under these circumstances the use of a force of seasonal migratory agricultural laborers developed. During this period the laborer was usually a disappointed gold seeker or floating immigrant who had not found his place in the rapidly changing economy of the period. These migratory seasonal laborers replaced the Indians as a source of labor supply. The very low costs of production on large-scale farms and the absence of a type of employment that encouraged a movement up the "agricultural ladder" from farm laborer to operator served to minimize the rate of subdivision and tended to maintain the system of large-scale operation and specialization. The smaller farms of the more usual family-size pattern, when developed, appeared along the valleys tributary to San Francisco Bay and the coastal areas where there was access to the markets in the towns. While there was a substantial increase in the number of these smaller farms, the new large-scale wheat farm and the old large-scale cattle operation continued to dominate the agricultural scene.

The effects of large-scale specialized agriculture on the economic status of those who worked the land were noted by the State Agricultural Society in California as early as 1869, which commented as follows:

> It is a shameful and deplorable fact, that many of the naturally best grain-producing portions of our State have been cropped every year, for from ten to fifteen years in succession, with grain, and in many cases with an unvaried single crop—wheat * * * throughout the agricultural districts, there is a season of active labor for all and a season of idleness for all. As a result of this management of our great agricultural industry of the State, there is lost to these districts, and to the State at large, each year, the profits of nearly half the agricultural labor of the State. As another result, all that large class of persons who depend for their livelihood on daily labor upon our farms, are during this idle season, thrown out of employment, and are consequently deprived of the means of subsistence, and to compensate them for this idle season, they are compelled to demand of their employers proportionally high wages while they do labor. The employers, who from the exigency of their position in the busy season, are, in turn, compelled to comply with this demand. Thus it turns out, that for the year's operation the farmers themselves realize about half what they should realize, and the labor they employ, though receiving double price for the time actually engaged, is but poorly paid.[13]

Just as the pattern of land ownership and operation had become established in the period 1830 to 1850, so in the period from 1850 to 1870 the nature of the employment of workers in the agricultural labor market was fixed. Responding to the seasonal demands for their labor, the "bundle" tramps migrated through the agricultural areas during the busy seasons and gravitated into the cities during the slack periods, failing to find in their temporary employment any adequate support on an annual basis. One of the acute observers of California agriculture during this period was Henry George who, in speaking of the farm laborers of California of 1871, said:

> And over our ill-kept, shadeless, dusty roads, where a house is an unwonted landmark, and which run frequently for miles through the same man's land, plod

[12] See Rogin, Leo, The Introduction of Farm Machinery, University of California, Publications in Economics 9 (1931), pp. 42–44.

[13] Quoted by Varden Fuller in exhibit 8762-A, pt. 54, p. 19806.

the tramps, with blankets on back, the labourers of the California farmer, looking for work, in its seasons, or toiling back to the city when the plowing is ended or the wheat crop is gathered.[14]

Several developments in the character of the labor supply during this period should be noted. In 1850 there were only 872 farms. The adventurers who responded to the challenge of great wealth in California in connection with the gold rush did not readily fit into the system as reliable farm laborers. For them farm labor was only a temporary pursuit. The Indian working force, while available, was not adequate for a rapidly expanding agriculture. Vast acreages of land, rich, fertile, and enjoying a favorable climate, were being rapidly developed. Many factors favorable to production for an external market began to appear. Under all these circumstances it is not surprising to find evidences of a concern for increasing the population by immigration and developing sources of labor supply. As early as 1853, Californians were considering methods of securing immigrants from outside the State. In 1857 a group of Californians were reported to be in New York, advertising and arranging for the transportation of labor to California.[15] This necessity for encouraging immigration was discussed by the California State Agricultural Society for many years, beginning in 1865:

For the past ten years it has been evident to all who have given the subject a careful thought, that nothing would contribute so much to the advancement of our prosperity as a common wealth, as the influx of a large immigration of industrious citizens. Every class of the community experiences the want of labor.[16]

However, early endeavors to influence the migration of laborers to the Pacific coast were counteracted by literature issued by the San Francisco labor unions. Circulars warning laborers that California was no place for a poor man were sent throughout the United States. In 1869 the California Immigrant Union was formed with the broad objective of encouraging immigration from Europe and the eastern part of the United States to California. It was a service not only for agriculturists but for all employer interests. This organization sponsored the distribution throughout the Eastern States of a pamphlet entitled "All About California," which, among other things, emphasized the vast opportunities in agriculture.

The tremendous increase in the white population in California during the period from 1850 to 1870 [17] did, however, provide the labor pool from which large-scale California agriculture was able to draw its first group of seasonal migratory workers. The first foreign labor, the Chinese, began to appear on California farms during this period. Between the years 1850 to 1870, the Chinese on the Pacific coast increased from 7,000 to approximately 70,000, and the census of 1870 revealed that the Chinese constituted approximately one-tenth of the farm labor group in California.[18] They were engaged for the most part in wheat fields, hop fields, and orchards. As early as 1854 the agricultural interests visualized the Chinese as the labor pool for a greatly expanded agriculture. In that year, the following statement appeared in the California Farmer:

California is destined to become a large grower of Cotton, Rice, Tobacco, Sugar, Tea, and Coffee [sic] and where shall the laborers be found? Americans

[14] Quoted by Carey McWilliams, Factories in the Field, Little, Brown & Co., 1939, p. 25.
[15] See pt. 54, exhibit 8762-A, p. 19799.
[16] Quoted by Varden Fuller in exhibit 8762-A, pt. 54, p. 19800.
[17] See pt. 54, exhibit 8762-A, p. 19801.
[18] Ibid.

will not become the working men of our tule land, in our Rice fields and our Cotton plantations and other departments of the same kind of labor. At [in] the South, this is the work of the slave, but slavery cannot exist here. California is a Free State—her citizens have spoken it—human progress has uttered it—God has said it. Then where shall the laborers be found? The Chinese! And everything tends to this—those great walls of China are to be broken down and that population, educated, schooled and drilled in the cultivation of these products, are [sic] to be to California what the African has been to the South. This is the decree of the Almighty, and man cannot stop it.[19]

However, it was sometime later that the release of the Chinese from work on the Central Pacific transcontinental railroad and their forcible expulsion from the mines resulted in their movement into the farm labor market. The suitability of the Chinese as a cheap labor supply for large-scale agriculture is reflected in an early comment that they were employed to such an extent as to—

soon become indispensable to our wheat growers * * *. We must have labor from some source; and if China can give us the men, the fields will never lie idle * * * poor John spreads a dirty tent in some corner of the field near water, sleeps on the ground, works by starlight, lives on rice of his own cooking * * *.[20]

Thus, some of the aspects of the California farm labor problem observable in recent years find their counterpart in the first American period of settlement and cultivation; aspects such as large-scale ownership and operation, specialization, mechanization of some labor operations, use of seasonal migratory labor, encouragement to immigration to provide an abundant labor supply, and use of cheap foreign labor. All of these had appeared in California agriculture by 1870.

[19] Quoted by Varden Fuller in exhibit 8762-A, pt. 54, p. 19802.
[20] Davis, Horace, "Wheat in California," Overland Monthly, I (November 1868), 450, quoted by Varden Fuller in exhibit 8762-A, pt. 54, p. 19803.

THE NATION-WIDE COMMITTEE

ON IMPORT-EXPORT POLICY

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General Counsel

June 16, 1972

Honorable Adelaide Stevenson
Room 201 Senate Office Building Annex
Washington, D. C. 20510

Attention: Mr. Chertkov

Dear Mr. Stevenson:

I read of your hearings as chairman of the Subcommittee on Migratory Labor of the Committee on Labor and Public welfare, to be held June 19 and 20, the Congressional Record of June 12.

The subject is of great interest to me and I inquired into the possibility of testifying, but found that the calendar was already filled. Nevertheless I was accorded permission to submit some material which, though not being directed toward the subject of land grant colleges, is, I believe, highly relevant because it traces the employment trend in agriculture over the past thirty-five to forty years, as well as the great increase in farm productivity with its consequent displacement of some 7 million agricultural workers.

Also, I have just completed another study that dwells on Productivity and Employment, including, quite centrally, the experience in agriculture over the last twenty-odd years.

I am happy to submit these papers for inclusion in your printed record. Should the hearings be continued I would be happy to testify in person.

Sincerely,

O. R. Strackbein
President

ORS:r
Enclosure

Trade Perspectives
for
Industry, Agriculture and Labor

by

O. R. Strackbein, President
The Nation-Wide Committee on Import-Export Policy

March 3, 1972

I.

When our national farm policy, under pressure of extremely low farm prices, in the 1930's veered from laissez faire to governmental interference, a torrent of discussion and even acrimonious debate raged throughout the country.

The Agricultural Adjustment Act of 1933, the principal legislative instrumentality of the shift, was declared unconstitutional by the Supreme Court. It was reinacted in modified form in 1935. The basic principle of the legislation rested on the parity price concept.

Since agricultural prices had declined much more sharply than the price of manufactured goods, i.e., goods the farmers themselves bought, the farmers' weak competitive position was regarded as entitled to remedial support. The bargaining position of the farmer was relatively weak because he could not cut back his output temporarily simply by laying off workers and then resuming production as supply was no longer excessive, as

(over)

industry was able to do. Moreover, weather conditions, over which he had no control, sometimes had more influence over crop size than any planning the farmer might undertake. Beyond these difficulties which reduce their competitive footing, farmers are scattered far and wide over the countryside, thus making joint or cooperative action, such as is necessary for control of supply, relatively difficult.

Under the new farm program certain crops, regarded as basic, were accordingly made eligible for governmental payments under the new legislation if the prices were found in comparison with a base period, to be below the level of parity with the prices of the articles farmers buy. If the price of wheat on the market, for example, was 80 cents per bushel while the price of the goods the farmer purchased was $1.00, the government would pay the farmer the difference, or 20 cents per bushel.

In order to avoid such an increase in planting as would cause the market price to fall still lower, thus requiring the government to pay more, the Agricultural Adjustment Act provided for removal of surpluses from the market, and other legislation provided for acreage control and retirement of land from cultivation in return for other payments. Provision was also made for the imposition of import quotas if imports interfered materially with any program.

The legislation represented overt interference with free enterprise and set aside the competition that supposedly nurtures the free market. The action was justified in the name of the national economic emergency.

A few years later wages were also removed from the free play of market forces by statutory action establishing obligatory collective bargaining and minimum wages. These controls have become a permanent part of our regulatory processes.

Relative Price Declines 1929-32

Whereas the wholesale prices of all commodities including farm products declined from an index of 95.3 in 1929 to 64.8, where 1926 prices equal 100, the index of farm prices dropped from 104.9 to 48.2. The decline for all commodities was 30.5 percentage points while on farm products the drop was 56.7 percentage points. The index on metal and metal products fell only 20.3 points, or from 100.5 to 80.2. Building materials fell 24.0 points, chemicals and allied products, 20.1 points, fuel and lighting, 12.7 points, house furnishings, 19.2 points, and miscellaneous items 18.2 points.

Agricultural machinery and equipment declined only 13.8 percentage points. Electricity rose by 10.2 points. Motor vehicles fell 12.9 points, plumbing and heating 28.2 points, lumber by 35.3 points. None fell as sharply as agricultural products.

The following Table presents the 1929-32 wholesale price declines for various products:

Wholesale Price Declines, Farm and Other Products

1929-32

Product	1926 equals 100 1929	1932	In Percentage Points	In Per Cent
Farm Products (all)	104.9	48.2	56.7	54%
Grains	97.4	39.4	58.0	59
Livestock & poultry	106.1	48.2	57.9	54
Other Products				
Leather	113.2	65.1	48.1	42
Shoes	106.3	86.1	20.2	19
Clothing	90.0	63.0	27.0	30
Fuels and lighting materials	83.0	70.3	12.7	15
Anthracite	90.1	88.4	1.7	1
Electricity	94.5	104.7	+ 10.2	+ 10
Petroleum products	71.3	45.4	25.9	36
Agri. Mach. & Equip.	98.7	84.9	13.8	13
Motor Vehicles	100.0	87.1	12.9	12
Brick & Tile	94.3	77.3	17.0	18
Cement	89.0	74.3	14.7	16
Lumber	93.8	58.5	35.3	37
Chemicals	99.7	88.8	10.9	10
Furniture	95.0	75.0	20.0	21
Auto Tires & Tubes	54.5	41.1	13.4	24

(Statistical Abstract of the United States, 1951, Table 325, p.280)

The relatively sharp decline in agricultural prices from 1929 to 1934 as visible in the Table, confirms the weak competitive position of farmers compared with industrial producers at that time. Historically agrarian producers are in normal times relatively weak in bargaining power face to face with industry.

Reversal of the Downtrend

If next we compare the increase in wholesale farm prices from 1932 to 1939 with the increase in wholesale prices of nonfarm products, we will be able to observe the effects of the farm program toward bridging the gap between farm and other prices.

Increase in Wholesale Prices

1932-1939

1926 equals 100

Product	1932	1939	% Increase
All Commodities	64.8	77.1	19
Farm Products	48.2	65.3	35
Grains	39.4	58.6	48
Livestock & poultry	48.2	72.2	49
Other farm products	51.4	62.6	21
Other Products			
Shoes	86.1	102.6	19
Clothing	63.0	82.0	30
Cotton Goods	54.0	67.2	24
Anthracite	88.4	75.8	minus 14
Electricity	104.7	78.6	minus 24
Agricultural impl. and equip.	84.9	93.4	10
Motor vehicles	87.1	93.4	7
Brick and Tile	77.3	91.4	18
Cement	74.3	91.3	22
Lumber	58.5	93.2	59
Chemicals	88.8	84.7	minus 4
Fertilizer materials	63.7	67.9	6

Source: Same

From 1932 to 1939 farm prices reversed themselves. The wholesale price of farm products had increased 35% by 1939 while the price of all commodities had increased only 19%. Moreover, the 19% included the price of farm products. Therefore it seems safe to say that farm prices rose twice as much from 1932 to 1939 as non-farm prices.

Nevertheless on the 1926 base of 100, the index of farm prices had not yet overtaken the index for all commodities, including farm products. The farm price index had risen to 65.3 compared with 77.1 for all commodities from 1926. By 1941 the gap had been narrowed considerably, the farm price index standing at 82.4 and that for all commodities at 87.3.

Elimination of the Price Differential

By 1950 the farm price index had gone ahead, standing at 170.4 compared with 161.5 for all commodities on the 1926 base.

At this point we move to a different base line, namely 1947-49 as 100. On that base the farm price index had risen to 106.7 by 1950 while that of all commodities, including farm products stood at 81.8. This seeming discrepancy compared with the preceding base merely meant that farm prices rose since 1947-49 while the price of other products fell between that base and 1956.

From 1950 on farm prices moderated, in fact receding to 97.2 in 1960 and ending at 111.0 in 1970. The all-commodity wholesale

price index, which had fallen to 81.8 in 1950 on the 1947-49 base, began a fairly steady upward course, reaching 94.9 in 1960 and 110.4 in 1970, or nearly the same level as the index for farm products which, as we have just seen, stood at 111.0 in 1970.

Of course, there were wide individual variations in the prices of both farm and industrial products. Grains moved from 121.3 in 1950 down to 98.8 in 1970 on the 1947-49 base. Livestock moved from 110.2 to 116.7 in the same period. Live poultry dropped from a high of 185.7 in 1950 to 99.6 in 1970. Fluid milk went from 76.5 to 115.3 while eggs fell from 134.5 to 126.8.

Among the industrial products there were also considerable variations. Cotton products between 1950 and 1970 dropped from 109.5 to 105.6 in 1970. Manmade fiber products also went down, from 135.8 to 102.1. Apparel, on the other hand, moved in the opposite direction, going from 90.5 in 1950 to 111.0 in 1970. Footwear, went from 70.2 to 113.0, while leather moved from 98.9 to 107.7.

Petroleum products moved from 85.1 to 101.1 in the 20 years, industrial chemicals, from 84.0 to 100.9, prepared paint from 71.2 to 112.4. Agricultural chemicals and chemical products fell slightly from 89.4 to 88.4. Tires and tubes, rose from 79.5 to 109.0, lumber, from 86.6 to 113.7, agricultural machinery, from 65.2 to 113.0. Household furniture moved from 75.6 to 111.6, concrete products, from 78.2 to 112.2, motor vehicles from 77.9 to 107.4.

Wholesale Prices on Farm and Other Products

1950-1970

1947-49 equals 100

Product	1950	1970	% Increase
All Commodities	81.8	110.4	35
Farm Products	106.7	111.0	4
Grains	121.3	98.8	minus 19
Livestock	110.2	116.7	6
Live poultry	185.7	99.6	minus 46
Fluid milk	76.5	115.3	51
Eggs	134.5	126.8	minus 6
Other Products			
Cotton products	109.5	105.6	minus 4
Manmade fiber prods.	135.8	102.1	minus 25
Apparel	90.3	110.0	22
Footwear	70.2	113.0	61
Electric power (1960)	101.2	104.8	4
Petroleum products	85.1	101.1	18
Industrial chemicals	89.4	88.4	minus 1
Tires and Tubes	79.5	109.0	37
Lumber	86.6	113.7	31
Agricultural mach.	65.2	113.0	73
Household furniture	75.6	111.6	48
Motor Vehicles	77.9	107.4	38

Source: Stat. Abst. of U. S. 1971, Table 531, p. 335.

Farm Income

As might be expected, farm income declined sharply during the Great Depression. Gross farm income stood at $13.8 billion in 1929 and dropped to $6.4 billion in 1932. Thereafter a slow increase was recorded, the 1939 income having reached $9.7 billion or $10.5 billion including government payments, still short of the 1929 level. By 1945 the total receipts had reached $24.5 billion including government payments of $700 million. (Stat. Abst., U. S. 1947, Table 669, p. 609).

The income continued upward, reaching $32.1 billion (gross) in 1950, $38.0 billion in 1960 and $56.1 billion in 1970. (Stat. Abst., 1971, Table 944, p. 581).

Trends in Number of Farms, Farm Size, Farm Population, etc.

Number of Farms

Either as a result of the farm program or as a concommitant, the number of farms declined steadily. In 1930 the number was 6.54 million. By 1950 the number was 5.64 million; by 1960 it had fallen to 3.96 million and to 2.92 million in 1970 or distinctly less than half the number in 1930. (Ibid., 1971, Table 924, p. 573).

Farm-Size

Meantime farm-size increased, moving upward from 151 acres per farm in 1930 to 389 acres in 1970, or well over twice the earlier size. (Ibid.)

This trend was, of course, greatly stimulated by the cost of farm machinery and equipment, outlays for fertilizer, pesticides, herbicides, etc., all of which were a part of farm technology but

represented heavy overhead, thus calling for larger acreage to absorb it.

Farm Population

During the same period, 1930-70, farm population shrank even more sharply than the size of farms increased. In 1930 farm population was 30.5 million or 24.9% of the population. By 1970 this number was 9.7 million, or 4.8% of the population, representing a shrinkage of more than 2/3. (Ibid, Table 922 p. 572).

Farm Labor

In 1932 the number of farm workers was 11.06 million. This was followed by a gradual decline, the number reaching 10.74 million in 1939, and 9.84 million in 1945. (Ibid. 1947, Table 212, p. 198). In 1950 the number was 9.92 million, and by 1960 the number had declined to 7.06 million and in 1970 to 4.52 million (Ibid. 1971, Table 367, p. 232).

In twenty years over 5 million workers lost their moorings. Yet the persistent cry of critics of our weak competitive position in the world is for greater efficiency! No thought is given to the consequences of such efficiency to employment such as accompanied increased agricultural efficiency.

Government Payments

Payments made by the Government to farmers began at $131 million in 1933, rose to $807 million in 1939, dropped to $769 in 1945, and on to $267 million in 1950. They continued relatively low until 1960, but reached $2.4 billion in 1965, and $3.7 billion in 1970. (Ibid., 1947, Table 670, p. 610; 1951, Table 681, p. 580,

and 1971, Table 944, p. 580).

Acreage Harvested

It was to be expected that the total acreage harvested would have declined as acreage control and withdrawal of acreage under the soil Conservation Act progressed.

In 1930 cropland harvested was 359 million acres. By 1940 the acreage harvested had declined to 321 million. This was followed by an upward movement. The 1950 acreage was 345 million acres, but by 1955 the downward trend resumed. In that year the acreage was 340 million, followed by 324 million in 1960. By 1965 the acreage had fallen below 300 million, or to 298 million in that year. Preliminary statistics set the total at 297 million acres for 1970.

During the forty-year period of 1930-1970 the acreage decline was in the magnitude of 17%. Volume of production by contrast had increased several fold, as detailed immediately below.

Farm Productivity

Meantime our population grew by 80 million or 65%.

Crop yields per acre since 1930, however increased more steeply, especially since World War II.

The yield of corn per acre was 24.1 bu. per acre in 1931. It had increased to 31.0 bu. in 1941 and reached 37.0 bu. in 1946. By 1960 the yield had increased to 54.7 bu. and in 1970 it had gone to 71.7 bu., after having reached 83.9 bu. in 1969. A blight infestation reduced the average yield in 1970. In any event, a three-fold increase in yield per acre represented a high reward for the farmer's effort.

Wheat virtually doubled its yield during the same period, moving from 16.3 bu. per acre in 1931 to 31.1 bu. in 1970. It moved up 5 bu during the 1960-70 decade.

Soybeans, now a leading farm crop, were in their infancy in the first half of the 1930-40 decade. Average yield per acre during 1931-35 was 15.4 bu. per acre. In 1941 the yield had risen to 18.0 bu. It moved upward to 23.5 bu. in 1960 and to 26.8 bu. in 1970. The increase in output per acre was a little less than 75%.

Irish potatoes also enjoyed a doubling in the yield per acre, moving from 110.1 bu. in 1931 to 131.2 in 1941. In 1960 the yield had risen to 185 bu. and in 1970 to 228 bu.

Cotton yielded 211.5 lbs. per acre in 1931, rose to only 231.9 lbs. in 1941, on to 284.0 lbs in 1948 and up to 446 lbs. in 1960. The 1970 yield was 441 lbs., although 527 lbs. had been reached in 1965. Output per acre had more than doubled.

Tobacco enjoyed a yield of 808 lbs. per acre in the 1931-35 period. This had risen to 966 lbs. in 1941 while the 1950 yield moved up to 1277 lbs. In 1960 a further gain up to 1,703 lbs. was achieved, while by 1970 the yield had moved to 2,120 lbs. or 2 1/2 fold that of 1931-35.

Rice in 1931 yielded 2,079 lbs. per acre but dropped to 1,903 lbs. in 1941. In 1950 the yield had risen to 2,362 lbs. By 1960 an additional 1,000 lbs. per acre had been reached at 3,423 lbs., and in 1970 yet another 1,000 lbs. had been added, at 4,566 lbs. per acre. The yield had more than doubled since 1931.

(For yields per acre see Stat. Abst. 1947, Table 703, pp. 638-641; Ibid, 1951, Table 710, pp 604-607, and 1971 Table 965, pp.592-2).

Man-Hour Per Unit of Production

Output of Farm Labor

Crop	1935-39	1945-49	1955-59	1965-69
Corn Man-hours per 100 bu.	108	53	20	7
Wheat Man-hours per 100 bu.	67	34	17	11
Potatoes Man-hours per short ton	20	12	6	4
Cotton Man-hours per bale	209	146	74	30
Tobacco Man-hours per 100 lbs.	47	39	31	25
Milk cows Man-hours per cwt of milk	3.4	2.6	1.7	0.9
Cattle other than dairy Man-hours per cwt of beef	4.2	4.0	3.2	2.1
Hogs Man-hours per cwt	3.2	3.0	2.4	1.4
Chickens (egg-production) Man-hours per 100 eggs	1.7	1.5	0.9	0.4
Chickens (broilers) Man-hours per cwt	8.5	5.1	1.3	0.5
Turkeys Man-hours per cwt	23.7	13.1	4.4	1.9

(Stat. Abst., 1971, Table 954 p. 587)

This table shows the increased productivity per farm worker, but the table begins with the 1935-39 period and ends with the 1965-69 period. Thus is lost the increase that took place before 1935 and after 1969. Nevertheless the reduction in man-hours required per unit of production is exceptionally sharp in some instances, such as in corn production and in the production of chickens (broilers) and turkeys.

The next table shows by index numbers, where 1947-49 equals 100, the output per man-hour on farms from 1930-1970:

Farm Output Per Man-hour - Index where 1947-49 = 100

	1930	1940	1950	1960	1965	1970
Total Farm Products	53	67	112	206	290	357
All Livestock & Prods	76	80	107	159	257	337
All Crops	50	67	114	220	267	317

(Stat. Abst. 1961, Table 885, p. 644 and 1971, Table 953, p. 586. For the years 1965 and 1970 it was necessary to convert the 1967 base of 100 to the 1947-59 base.)

From the preceding table we see that the output per man-hour moved up sharply decade after decade from 1930 to 1970. Productivity per man-hour in All Farm Products increased 6.7-fold from 1930-1970; it increased 4.4-fold for All Livestock and Products, and 6.3-fold for All Crops.

The slowest increase was in the first decade (1930-40 during which the first category (All Farm Products) increased only 26%, the second (Livestock) only 5% and the third (All Crops) only 34%.

In the second decade (1940-50) the first category increased 67%, the second 34% and the third 70%. In the third decade (1950-60) the increase was sharper, increasing by 84% in the first category, 48% in the second and 93% in the third. In the most recent decade

(1960-70) the increase in productivity continued at a high level. The first category rose 73%, the second (Livestock) 112% and the third, less sharply at 44%.

This record of performance vastly outdistanced that of American industry.

Unfortunately available statistics do not permit a complete comparison of productivity in the manufacturing industries with that recorded in agriculture. With respect to manufacturing as a whole the statistics do not go backward beyond 1950.

The following table shows the increase in productivity in manufacturing industry from 1950-70 in terms of index numbers with 1967 as the base.

Output Per Man-hour in Manufacturing

Index of Productivity

	1950	1955	1960	1965	1970
Manufacturing (1967 = 100)	64.4	73.7	79.9	98.3	108.1

(Stat. Abst., 1971, Table 350, p. 224)

Compared with the increase in farm productivity per man-hour the progress in manufacturing industry was pedestrian. Since 1950 farm output per man-hour tripled while its counterpart in manufacturing fell distinctly short of doubling.

We have scattered statistics on the man-hour output by some industries from 1935 to 1969, measured by the 1947 base. In a few instances we have the productivity from 1950 to 1969, where the base of 100 is 1967. The table follows:

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Output Per Man-hour - Selected Industries

Industry		1935	1939	1950	1955	1960	1969
Steel	1947 = 100	62.9	79.3	111.9	129.4	136.7	--
	1967 = 100	--	--	78.3	--	82.3	104.8
Petroleum refining	1967 = 100	--	--	39.4	--	68.4	111.7
Flour	1947 = 100	99.5	109.5	100.0	127.1	--	--
	1967 = 100	--	--	54.7	--	78.0	109.3
Paper	1947 = 100	95.5	109.2	118.9	137.5	--	--
	1967 = 100	--	--	56.4	--	74.7	109.5
Tobacco products	1947 = 100	69.4	80.0	119.3	126.2	--	--
	1967 = 100	--	--	59.6	--	82.2	103.6
Man-made fibers	1947 = 100	31.8	46.9	151.6	224.8	--	--
	1967 = 100	--	--	--	--	71.8	110.9
Cement	1947 = 100	72.6	89.7	116.0	150.7	--	--
	1967 = 100	--	--	47.3	--	71.5	109.4
Hosiery	1947 = 100	--	87.0	115.4	126.0	--	--
	1967 = 100	--	--	40.1	--	58.6	105.9
Confectionary	1947 = 100	79.2	89.4	102.5	127.0	--	--
	1967 = 100	--	--	51.2	--	78.3	97.8

(Stat. Abst., 1961, Table 292, p. 218; Ibid. 1971, Table 351, p. 224.)

II

Results and Effects of the Farm Program

Benefits

Measured by the increase in productivity (1) by the acre and (2) by the output per man-hour, the Farm Program exceeded all expectations. It has been hailed as a "miracle" of production. No single factor can be credited with the phenomenal rise in productivity or the increase in total farm output on lesser total acreage. Unquestionably price incentive and the removal of the harassing uncertainty that was the woe of individualistic farming, which is to say, setting of a guaranteed price at or near the parity level, represented a strong motivation.

The imposition of import quotas to prevent the break in prices that increasing imports, attracted by higher price levels would have generated, represented the removal of another negative factor. Contrary to the theory that import quotas and a guaranteed market at a good price lead to complacence, indolence and inefficiency, the agricultural community of this country proved the opposite.

Production control, though never perfect, nevertheless reduced one of the other principal curses of unplanned acreage planting and harvesting. Centralized planning under the aegis of the Department of Agriculture brought into farming and made possible the type of control that is much more easily exercised in manufacturing because of the concentration of production in plants and factories where

thousands of operatives and management work together.

Yet, without the increased use of fertilizer, pesticides and herbicides, the development of improved strains of crops, soil conservation plus intensive mechanization, the amazing increased productivity that crowned the Program would not have been achieved. It was therefore the combination of contributory elements, energetically pursued, that brought the results that were actually achieved.

Side Effects on Trade

Interference with the free flow of trade was considered an unfortunate but necessary effort to prevent the Program's undermining from abroad. As an example, before the importation of cheese was strictly limited, the higher market price assured by the dairy program attracted heavy imports of cheese with the unhappy result of surplus accumulation of domestic cheese in our warehouses and the consequent drain on the Treasury which paid the farmer the guaranteed price for his production. Imports of raw cotton, wheat and wheat flour, other dairy products, peanuts and a few other items were also held to a mininal level as a means of avoiding surplus accumulation and the loss to the Treasury that would thus result when the surplus could not be disposed of.

In the case of cotton a very embarrassing competitive boomerang developed in time. Domestic mills paid the higher American price while foreign countries could buy our cotton at world prices. Since these were some 25% - 30% below the American price, foreign textile mills began invading our market with textiles that enjoyed this

added competitive advantage. Legislation to make good the differential from which the domestic mills suffered, was passed, with the Treasury paying out to the cotton mills the make-up that eliminated the foreign competitive advantage from this source.

Exports of farm products represented an important means of removing surplus crops which continued to accumulate despite acreage control. While output per acre was climbing rapidly, the lower production costs did not lead to higher consumption beyond population increase because of the inelasticity of the demand for most farm products. Withdrawal of land from cultivation also did not assure an "ever normal granary" because a high yield might undo the acreage cutback. Surpluses continued to embarrass the Government - not so much the farmer since he was assured of his income in any event.

Since exports were sold at world prices and since these were usually below the domestic level of supported prices, our exports became a source of the cost of the Program. Payments to farmers covered their total production of the crops subject to price support, and the higher the export volume and the lower the world price compared with the domestic support price, the higher the cost to the Treasury.

Thus while the Government stimulated exports in many instances, depending on its degree of success, it increased its own out-payments from the Treasury.

The highly restrictive import quotas, such as those relating to raw cotton, wheat, wheat flour, peanuts, dairy products, naturally discouraged the growth of imports. Yet this fact did not, to repeat,

lead to a lag in productivity. Quite the contrary. Many of our other agricultural imports were, of course, free of duty since they did not compete with domestic production, such as coffee (the principal item), bananas, tea, cacao-beans, crude rubber.

Our imports of agricultural products have declined sharply over the years in terms of percentage of total imports. In the 1932-36 period 50.9% of our total imports were agricultural. A high point was 1937 when 53.1% of all imports were of that origin. A decline in the proportion set in after World War II. The percentage was 46 during the 1942-46 period. By 1952-56 this had declined to 39%; by 1957-61, to 28%; by 1962-66, to 22% and in 1969-70 to the low level of 14%.

This does not mean that total agricultural imports declined but that other imports, particularly of manufactured goods, grew very much more. Our agricultural imports were $3.37 billion in the 1947-51 period, and $5.48 billion in 1970. This slow growth was not attributable wholly to our import quotas, because our imports of duty-free items did no better. The consumption of food products is limited by the population. Coffee imports, duty-free, increased only 7% in pounds from 1950-70. Tea imports increased 21% or one per cent per year.

Exports of Agricultural products also lagged in relation to other exports. During the 1932-36 period they were 36.4% of our total exports, compared with the 50.9% for imports, already mentioned. During the War period (1942-46) exports dropped to 19% of total exports. During 1947-51 the level was 28%, a quite considerable increase; but

that level has not again been recaptured. By 1960 the share was down to 26%. There followed a rapid slide which in both 1969 and 1970 reached the level of 16% and 17% respectively. Again, this decline did not mean that there was no growth in these exports but simply that they lagged far behind the growth in our other exports, particularly that of machinery and aircraft. Indeed the exports of these two items alone in 1971 were 2 1/2 times as high as total agricultural exports. (Stat. Abs., 1947, Table 697, p. 632; Ibid, 1971, Table 959, p. 589; Survey of Current Business, Dec. 1971).

Exports of agricultural products would have been on an even lower level had they not been boosted by certain governmental programs through subsidy or outright gifts. These were principally Public Law 480 exports and those that moved under A.I.D. (Act for International Development), Food for Peace, etc. Such exports were at the level of $835 million in 1955; $1.28 billion in 1960; $1.59 billion in 1965 and $1.01 billion in 1970. Beyond that, certain so-called "commercial" shipments of wheat, cotton, etc., were made at world prices where our Government made up the difference in the form of a subsidy.

In 1970, for example, such "commercial" exports, i.e., supported by export payments, totaled $1.17 billion, over and above "Exports under Governmentally-financed programs", which in 1970 were $1.01 billion, as just noted. Between the two classifications 32.3% of our agricultural exports, or $2.18 billion, moved in 1970. (Foreign Agricultural Trade of the United States, Monthly of the Economic Research Service, U. S. Dept. of Agri., April 1971, Table 2, p. 8.).

It has been the uniterrupted practice of the Department of Commerce to treat these agricultural exports as true exports and using them in striking a trade balance each month, each quarter and year. The resulting trade surplus has been used improperly as evidence of the competitive prowess of this country. Had our "give-away" programs been in the magnitude of $5 or $10 billion our competitive position in the world could, of course, have been made to appear in an even more favorable light; but such a showing would not have reflected a stronger competitive position for us.

Import Quotas and Prices

It seems safe to say that but for the import restrictions in the form of import quotas during these many years, based principally on Section 22 of the Agricultural Act of 1935, our wheat, cotton, dairy, beet sugar and farmers of other crops would have been ruined by the unimpeded competition from other countries. The object of the quotas was not to raise the prices of these crops (that was done by legislation) but to prevent their falling again to disastrously low levels.

Indeed the prices of the commodities that were placed under import quota protection, with one exception, lagged behind the general price level in 1970. The record of the price trend in these instances overwhelmingly contradicts the popular impression that import quotas lift prices to the consumers above the level of the prices of products that are not under import restriction, and that the sole purpose of quotas is to raise prices.

The quota protection unquestionably released the energy of farmers to increase output per acre under a guaranteed price, with the assurance that they would not be deprived of the fruits of their efforts by imports which had the unearned competitive advantage that comes from the very low wages paid abroad.

Unfortunate Fall-Out of the Agricultural Program

One of the side effects of the great surge in agricultural efficiency was the displacement of farm workers as well as farmers themselves. Also, stream pollution by hydrogenous and phosphate materials used as fertilizers has aroused the fear of ecologists. The decline in the number of farm workers, noted earlier, was precipitate and massive. Greater efficiency, meaning higher output per man-hour, can indeed only be achieved in any meaningful degree by heavy displacement of workers, either in agriculture, industry or mining. From 1955 to 1970 employment in agriculture declined 48%. (Stat. Abs. 1971, Table 349, p. 223).

These evicted workers, over 5 million from 1950 to 1970, in great numbers crowded into our cities and added to the intractable urban problems of the last decade, including the crowding in the ghettoes.

Inelasticity of Demand for Farm Products

Much of the product of farms and grasslands caters to human necessities, particularly in the form of food. The great preponderance of acres is devoted to crops that directly or indirectly go to fill the human stomach. Examples of leading acreage crops

are corn (57 million acres of the 1970 300 million-acre total), wheat (44 million acres 1970), hay (63.2 million acres), and soybeans (42 million acres). Other acres of less impressive magnitude were barley (9 million acres), fruits and nuts (4.4 million), vegetables for sale (3.3 million), potatoes (1.4 million), beans (1.4 million), rice (1.8 million), peanuts (1.4 million), sugar (2 million). Cotton and tobacco acreage (nonfood items) is small comparatively (11.1 million and 899 thousand acres respectively.) Cotton products in general, contrasted to food, enjoy a relatively elastic demand. The amount the consumer may spend on clothing is not limited as is the consumption of food.

Some of the crops mentioned only serve as human food indirectly, as the corn fed to cattle, hogs and poultry, hay for cattle and dairy cows. Some serve nonfood purposes but these are of a smaller magnitude.

It should be recalled that the total potential demand for food products is limited by the number of stomachs to be filled. The demand for these products is therefore quite inelastic, even with respect to the luxuries such as Russian caviar. Therefore a lower price will not greatly increase the demand. Whether wheat is a dollar or two dollars per bushel does not shrink or distend the human stomach. Consumption remains quite stable. Per capita wheat consumption has fallen in this country, but for other reasons than price, which today is moderate, i.e., 33% below the 1951-55 price despite the highly restrictive import quota.

Because lower prices do not stimulate demand in this field

overproduction quickly threatens a surplus in farm products.

Many products of industry are of a different character. If a product is useful, a pleasure to possess, caters to comfort or convenience or to personal social prestige, it may be consumed in multiple units, depending on its price. Milady may have a dozen pairs of shoes when only one pair is needed to avoid going barefooted. A household may have a number of radio and TV sets. If the price is high in relation to consumer income, sales of such products will be limited accordingly. As the price is reduced because of lowered production cost and competition, more consumer pocketbooks are opened. The demand, in other words, is elastic. It expands as the price declines but shrinks when the price rises. There are, of course, different degrees of elasticity.

The great objective of American industry the past half century and more has been to find products, principally nonessentials, that cater to consumer desires, and then to bring down the cost of production through increased productivity. If the mass pocketbook could be tapped a bonanza awaited the patent-holders. Examples were the automobile, radio, television, telephones, household appliances, certain chemical products, finery and style goods, etc. It is precisely because such products are nonessential to human subsistence that the demand for them is elastic. The price then becomes important. If this is lowered more people with lower incomes can buy. The purchase of nonessentials can be postponed or curtailed depending on the conditions of the consumer's income, his outlook for employment, etc. For this reason an economy that caters to production of nonessential

goods, is quite sensitive to psychological factors, such as the uncertainty caused by rising imports.

The more units that our industries could produce the more could be sold because mass production meant lower costs. Such was the basis for our "growth industries", electronics, chemicals, etc. There was little danger then of a surplus - the exact opposite of the farmers' dilemma. When the latter produce beyond the stomach capacity of the country they quickly accumulate a surplus that must be exported or stored by the Government. However, those who produce nonessential goods also face excess inventories from time to time but for different reasons, such as consumer hesitancy for a variety of reasons to buy what they do not really need.

While the farm program was a phenomenal success as a provider of human necessities, the price exacted was also high. The striking success in raising productivity levels meant self-displacement by the farmers. Agricultural efficiency is not a royal road to an ever-expanding market. Not at all! The market responds only marginally. A substitute, such as oleomargarine for butter, which makes an acceptable article, distinctly cheaper, by not expanding the human stomach, simply displaces butter in the family budget. What one product gains in human consumption the other loses. Growth then depends principally on population growth.

This difference between products that enjoy an elastic demand and those that do not has far-reaching production-policy implications. The farm workers who are displaced by machinery stay displaced. If they are to be re-employed they must go elsewhere.

This fact, though highly significant, has not been adequately assessed.

Implications for Our Trade Policy

The unique American productive system became possible because of our rejection of the British colonial purpose of maintaining the colonies as agrarian producers of raw materials and as a market for manufactured goods. No agrarian economy can hope to achieve living standards such as are made possible by pointing industry toward the production of nonessential goods. We opened this route to new dimensions before the turn of the last century. We had glimpsed the possibilities of technology in the field of production and prepared the ground legislatively by restraint of monopoly (Sherman Anti-Trust Act 1890, followed later by other anti-monopoly measures.). If production of scale was possible because of technological progress it would be of little avail to embark on mass production if monopoly could prevent the passing of savings on costs to the ultimate consumer. (It is doubtful that recognition of this sequence was the basis for anti-monopolistic sentiment. The latter probably arose more from the producers who were squeezed by monopoly power held by their competitors than from public concern.)

When we adopted our Constitution someone had undoubtedly read Adam Smith's Wealth of Nations, and in keeping with his philosophy wrote into the Constitution a provision that prohibited the laying of tariffs on goods moving in interstate commerce. This prohibition laid the foundation for a national market in time - precisely what was needed if mass production was to become economically no less than

technologically viable when the time for it arrived much later.

As we moved to the status of an independent nation and undertook to develop an industrial base, so sadly and visibly lacking during the War of 1812, we adopted an external tariff. This was necessary to give us a start as an industrial nation.

Yet none of these combined favorable elements would have carried us to a new level, away from the European system, if the role of consumer purchasing power had not been perceived subsequently as an indispensable partner of mass production.

We did indeed embark on a course that in time left behind our inherited attitude toward wages, an attitude that outside this country (except Canada) has persisted. British economists (Ricardo and others) looked upon wages as a necessary evil and held that they should be held at a level that would least burden cost of production. This philosophy, of course, suited the factory owners. They had not perceived employee compensation as the principal component of the market for goods. This vision was left to their American cousins who came up with the interdependence between mass-production and mass-consumption and built an industrial empire on it, as exemplified by the automobile industry.

Elasticity of demand for nonessential goods that would bring moderate or great satisfaction to the consumer, if he was paid enough as a worker (an objective of organized labor) to buy more goods as the cost was brought down to his income level: that was the twin force that carried us to the pinacle of industrial development, i.e., lower costs (representing increased productivity)

met by rising income (higher wages) in the hands of the consumers.

This scaling of the heights obviously could not have been accomplished through agriculture alone, as already indicated. The demand was not sufficiently elastic for farm products. It was through industrial development that we moved far afield from our sister industrial nations. Had these other nations perceived as clearly as our unsung industrial economists (some of them academic) the dependence of production on a mass market they might have accompanied us on the upward escalator from the outset; and we could have had free trade among the nations as among our States. Instead they were skeptical and clung to the old attitude toward wages and thus cramped their market outlet. They stayed far behind us both in productivity and in wage levels until very recent times; and they are still behind in point of wages. Thus was laid the groundwork for the competitive discomfiture of this country during the past decade by the sudden technological catch-up activity of our foreign competitors.

After this country's final demonstration in World War II of what our industrial strength meant, the other capitalistic countries fell in line in pursuit of technological progress. Before long they came indeed to appreciate the need for a more massive market than their current territorial and population limits permitted; and they formed trading blocs (E.E.C. and E.F.T.A. in Europe) to broaden their market. They might have accomplished an interim enlargement of their still small markets by taking a more generous view of wages.

Fifty million Frenchman could offer a very handsome market if their wages were doubled as their productivity moved upward in a like

curve, and likewise the British, the German and the Japanese. The chicken-or egg sequence, however, presents a stumbling block in all such instances. Which comes first, the higher output with it lower cost, or higher wages with their higher purchasing power? The puzzle can only be broken by the entrepreneur who takes the risk of committing his capital on the basis of confidence. The consumer cannot take the lead toward higher consumption because the price of the goods has not been brought down far enough to attract lower layers of income, and he is not the one who reduces the cost. If he stretches his credit too far he is soon cut off. Therefore the first step in progress devolves on the enterpriser who must take the lead by increasing his output to gain lower costs, in the fervent hope that the consumers will fall into line when he is able to lay before them the goods they would like to buy if the price should come within their reach. If he is economically wise he will at the same time increase wages to assure higher purchasing power. He can do this because of the increased productivity of the workers using machines. Such was the story of Henry Ford, and he begot followers. It was he who introduced the $5 per day wage in appreciation of what makes a market.

This forward position taken by one who can sense and anticipate popular demand, who is also a bold risk-taker, indeed represents the entrepreneur's principal function in the capitalistic system. The failures, numerous as they are, are soon forgotten. If the investment climate appears favorable venture capital will soon again lead forth. That, at its best, has been the American experience of the

twentieth century until the decade of 1960. The vision of a vast national market has been the supreme motivation toward cost-reduction by the managerial forces, and this course, prodded by labor pressure, seeking the enlargement of consumer purchasing power through higher wages, not always in keeping with higher procuctivity, has by and large, been the balancing factor between the two sides of the mass-production, mass-consumption equation.

Mention should perhaps be made of farmer cooperatives as an exception to the usual form of capital formation and entrepreneurial activity in this country; but the cooperatives have been confined principally to the production and marketing of food or other agricultural products, and their success has not invalidated the observations made here about the development and production of nonessential goods.

Lesson From Agriculture, Industry and Labor

The treatment of all products as if the demand for them were the same or subject to the same influences represents an abysmal error. During the past few decades economists have repeatedly but erroneously equated import competition and the upsets it may produce with both domestic competition and with the disruption that may be caused by invention and development of new products on the domestic scene.

No effort has been made by them to take into account the economic effects of a differential in (1) demand elasticity, (2) divergent competitive levels or (3) the time needed for adjustment. Yet, as we have seen, these differences may be far-reaching and may produce unfortunate consequences in policy decisions if they are not

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understood, or are ignored.

It is one thing when the automobile replaces the horse and buggy. It is critically different in its consequences when the invention of the harvester combine and the tractor displaces farm workers. Again it is different when development of the television set reduced radio listening and motion-picture attendance.

Those replaced by the harvester combine, the tractor, the cottonpicking machines, etc., remain displaced because the lower costs brought about by the introduction of the machines does not mean greater consumption of the product, such as wheat, as it would if the demand for the product were elastic. Inelasticity of demand locks the door, so to speak, to expanding employment within the immediate field of its displacement. When the cost and the price of the automobile were brought down by mass production and met at the potential-consumer end by people who earned enough money to buy the lower-priced car we had a new industry and it soon employed many more workers than the displaced industry had employed. The new industry was protected by patents and had adequate time to demonstrate its acceptability, usefulness, and economy to the interested consumers, unchallenged by imports enjoying the advantage of yet lower costs. It needed no import competition to prod it in the first place and indeed there was none at that time to disrupt or halt its progress.

This is not to say that the demand for all nonagricultural products is elastic and that therefore consumption will increase handsomely as prices are reduced. There are many exceptions. There are

products for which the demand depends not on the product itself but on outside developments. Fuels, steel, construction materials are examples. They are not bought for themselves.

One exception was impressed on us by the recent experience with coal mining. The industry was faced early in the 1950's with extinction by competition from diesel oil, imported residual fuel oil, and natural gas. With great effort the coal industry mechanized itself over a period of 15 years. It achieved a new competitive position, even to the extent of shipping large tonnages to Japan and Italy. Recently, to be sure, the price of coal has risen beyond the general price level, the rise having been aggravated by the high export tonnage, but the effect of maximated productivity for years was to keep the price low while the price of other products rose.

The process of salvation through higher productivity unfortunately displaced from 2/3 to 3/4 of our coal miners - over 300 thousand - and gave us the distress of Appalachia. The lower price of coal achieved before other factors raised the level, did not, however, lead to enough additional coal consumption to rehire the displaced miners, much less additional workers. The number of coal miners has declined from 480,000 to about 125,000. The reason for this negative result lay in the relative inelasticity of the demand for coal, totally different from the demand for automobiles.

As in the achievement of greater agricultural efficiency, coal mining also paid another efficiency penalty. A part of the increase in productivity came from the spread of strip-mining that has lately so greatly aroused the ecologists.

Foreign vs Domestic Competition

Different as are the effects of cost-reduction among domestic products subject to a different character of demand (in point of elasticity), the effect is not as great as is experienced from import competition such as many industries face today. The disruptive effects of adjustment to domestic competition are often spread over years. The automobile did not replace the horse overnight. It needed a generation or two of time.

On the domestic scene, moreover, there may be no wage differential, or if one exists, as that between the North and the South which motivated the shift of our textile industry, it is not as wide as the differentials separating our wages from those paid by some of our principal foreign competitors. Also, the shift of the cotton textile industry to the South spanned over fifty years of time. Even so the distress in New England was acute. The rise of sharp import competition since World War II has been precipitate by comparison, coming up overnight, so to speak. There was little time for adjustment.

In the past it was often said with some proximity to the truth that our higher wages were offset by our higher productivity compared with that of our foreign competitors. Today the wide diffusion of our technology no longer sustains such a contention. Foreign wages have indeed risen sharply and in many instances proportionately more than our wages, but a 10% increase on our base is equal to a 100% increase in what were the wage levels of some of our leading competitors. Also, in the past we levied a tariff that averaged

in the magnitude of 50% ad valorem on imports, whereas today it averages less than 10% on dutiable items, imports of which represent about 65% of total imports.

The importance of the wage differential between the domestic and foreign levels, hand in hand with relative productivity, cannot be ignored without courting false conclusions. In this country employee compensation represents approximately 80% of corporate costs of output. (See Stat. Abs. 1971, Table 493, p. 310). To be properly treated as a cost element labor outlay must be traced from the first steps of production, be this agricultural, extractive or whatever, and then taken through all the steps of processing, refinement, purification or fabrication, all involving their share of employment; picking up transportation charges, insurance, financing and the appropriate share of interest, plus warehousing, on the way, all of which also call for paid employment, and finally assembling (if it is involved) and finishing.

We have been badly albeit unwittingly misled by the practice of the Bureau of the Census in its definition of industry. What it calls the "automobile industry", for example, incorporates hardly more than one-fifth of the productive activity performed before reaching Detroit, from the iron ore mines to the steel mills, to the coal pits, and all else involved in producing components for an automobile, to the point of making it ready for delivery to the customer. According to the cenus reports labor costs are only some 15-20% of the value of the automobiles shipped. The error lies in regarding the operation of the four or five companies that merely

assemble the final product in Detroit and elsewhere as the "automobile industry." Actually the share of all employee compensation measured against the final f.o.b. Detroit price, we may be sure, is over 75% when all the pre-Detroit operations are taken into account.

The nomenclature of the Census Bureau is a cardinal error because it conceals the extremely crucial part played by employee compensation (particularly wages) in the capacity of the market to consume agricultural, mineral and industrial output. Nothing measures the market, actual or potential, more accurately than the number of workers employed and the actual or potential level of their compensation. To minimize this, even unintentionally, as is accomplished by the Census Bureau, inhibits the perception of the relation between wages and the market, and understanding its meaning.

Odd Consequences of Current Import Competition

Import competition such as has developed during the past decade for American industry has the power to convert the cost-reduction accomplished by industries dedicated to the production of nonessential consumer goods (perhaps over 90% of the total) into the sterile job-generating condition characteristic of producers of essential goods when the cost of the latter is reduced. Like these, the cost-reductions effected by the producers of nonessential goods when they are faced with virtually unimpeded low-cost import competition, result in nearly zero increase in consumption of the American-made product in response to the lower prices, if not actual reduction. New jobs are not generated; they are lost, and the displaced workers are not rehired.

The radio and television workers in producing plants who were dismissed in order to reduce costs remained laid off when improved production methods made it possible for fewer hands to do the work of more, or when segments of the industry moved abroad. The domestic industry does not then achieve larger sales because imports meet the increased demand with yet lower prices. This sterility has resulted from the persistence of a wide wage-gap and the enhanced productivity of foreign industry, whether it be native or American-owned or whether it utilizes foreign patents or works American patents under license. The effect is the same.

The increased employment that would have greeted our household electronic goods industry as the prices were lowered in response to improved technology in the absence of lethal import competition took place in other countries. So far as increased employment in the home market was concerned the product, instead of being radio or television receiving sets, or recorders or record players, might as well have been wheat or corn, so far as job-generation was concerned.

So long as foreign producers can challenge our manufacturers or venture capital and virtually pre-empt the mass market or broader mass market they seek through radical innovations, the outlook for expanded employment from these sources will be dim indeed.

Where else then is expanded employment to arise? Certainly not from increasing agricultural exports! Farm employment is already down to 2.86 million (1970). The only hope lies in the shift to the "service" industries, unless other measures are taken. A heavy movement toward service employment has been underway over

several decades. (More on that later).

If our inventive genius and our productive and managerial energies are to be sterilized so far as their capacity to increase employment is concerned, we will be back to a pedestrian economy, and the zero-growth advocates can be happy.

For a time in recent years we were able to increase our exports precisely because the trek overseas by our private direct investors in foreign plants and subsidiaries after 1955 or thereabouts pulled with it much American machinery, equipment and materials in the form of exports. These investments snowballed. The great surplus in machinery and aircraft export that developed in a decade incidentally thoroughly concealed the gaping deficit that was developing in our trade in nearly all other manufactured products. Our 1971 exports of machinery, aircraft and automotive products were 46% of our total exports and over twice as high as our exports of all other manufactured goods, and the deficit of several billion dollars in our trade in these other products was lost to sight. Beyond that the statistical practices of the Department of Commerce had the effect of making our merchandise trade balance look better by some $5 - $6 billion annually than it actually was in terms of competitive trade.

The export of machinery and modern equipment incidentally helped greatly in building the foreign competitive capacity. The foreign demand generated by our foreign investments, however, was neither self-perpetrating nor permanently wedded to American sources. Now after a decade or more even our machinery manufacturers are being hard pressed by imports of foreign-made machinery. This means that

the high hopes reposed in the increasing export of "high technology" goods as an escape hatch are also being dashed. Machinery and high-technology goods are no more immune to import competition than are other goods. The source of the foreign competitive advantage in the other goods applies as surely to high-technology goods. We have no technological skills superior to those of our competitors. Our producers in the early years of this century merely had higher motivation than their foreign counterparts.

The labor legislation that followed the new farm laws in the 30's was as clear a setting aside of the laissez-faire philosophy or free enterprise as was the farm-price and production-control legislation.

Child labor was outlawed as representing unfair competition. Minimum wages were set for two purposes: to increase labor income and to prevent "cut-throat competition" from "ruthless" employers from undermining the "fair" employers - provided, of course, that the outlawed producers operated in this and not a foreign country.

For some reason foreign wages, though even then far below ours, were not regarded as so much of a menace to our "fair" employers as were the low wages of some employers in this country.

We even encouraged the foreign producers to enter our market by launching a far-reaching tariff-cutting program, thus instituting increasing degrees of laissez-faire in this sector while squeezing it out in nearly all else.

Apparently we loved agriculture more than we loved industry, since we threw import quotas around the most important crops, for-

getting or not knowing that industrial employment is much greater and that agricultural employment was destined to shrink greatly under the farm program for reasons that are now chillingly clear.

One prime result of the labor legislation was virtually to take domestic wages out of competition, as was indeed the intent. In other words, approximately 80% of the cost of production was put out of reach of the manufacturers as a competitive defense. This meant highly inflexible costs except those that could be achieved through labor displacement or greater efficiency, which is the same thing.

Thus was American industry left with only one weapon of any consequence, and this was a weapon that at one time did indeed lead to greater employment, as we have seen. Now, however, the scene has so greatly changed that it is no weapon at all other than one of self-destruction, since imports now hold the position of the "sweatshop operators" and unfair employers in this country against whom we legislated so vigorously and with such great popular support as evidenced by the heavy legislative majorities by which the measures carried. The policy even today is to open the door still wider to the foreign producers who are free to exploit our market to their benefit and thus prevent our labor from benefitting from the legislation that was designed to bring us full employment at wages high enough to buy our increasing output.

Foreign entrepreneurs now have the same strong motivation to invade our mass market as our own entrepreneurs harbored when the market was still theirs to develop and supply. The American mass market acts as a magnet and fuels the same tireless efforts abroad

aimed at its conquest as its earlier promise fanned the flames of industrial empire-building in this country during the first half of this century.

The invasion cannot be halted and the scene cannot be restored to its earlier attraction for the American entrepreneur unless the unearned competitive advantage held by foreign industries is appropriately moderated, tamed and contained. No more than Henry Ford needed a prod from import competition to create a market for his product does the present-day industrialist depend on a spur from foreign competition to do his best. In contradiction of this view it is necessary only to note that he is active and doing quite well overseas. The same one who is flourishing overseas because of his motivation from that source cannot be called lazy and will become no less active at home if his incentive is returned to him. If the home market re-offers him the incentive it gave him in the past he will reassert his former vigor. The American entrepreneur or industrialist has not thrown up the sponge. If he had done so he would not have invested $80 billion in foreign enterprise where the grass is greener. We may also reflect that if Henry Ford had faced the investment climate faced by American producers today in the face of imports, his enterprise would never have been promoted or, having been promoted, would have withered on the vine, or moved abroad.

Negative Employment

Meantime the workers who are not employed by industry in this country because of heavy import competition remain among the unemploy-

ed or displace others who are still employed. During the decade of 1960-70 four industries that experienced growing import competition, namely, steel, textiles and apparel, leather footwear, and stone, clay and glass, recorded a lag of 427,000 workers behind the growth of employment in all manufacturing industries. If the supplying industries such as coal, cotton, leather, etc. were taken into account the lag was at least double, or some 850,000 workers.

In other words, it is a deceptive practice to measure the effect of imports on employment by simply calculating the number of workers who would have been required to produce the increase in imports. Those who are not hired because of import competition suffer from the dampening of venture capital and the failure of investment to increase as it would in the absence of the strong import-pressure.

Conclusion and Remedy

We may let imports share equitably in our market and permit them to grow as our market expands, but we should not sterilize our entrepreneurs by rendering barren their efforts to build a mass market for good, useful and acceptable products.

Since we cannot reach foreign producers to place on them the same restraints, controls and burdens that we have placed on American industry with the effect of rendering it competitively virtually helpless except through the displacement of workers by greater output per man-hour, a course now all but rendered sterile for reasons already elaborated, we face the choice of stagnation or limiting

imports in an equitable manner.

The shift of employment from physical production in plants, in mines and on the farms, to the service industries does not invalidate or devalue the function of venture capital. Movement back to an agrarian economy would not, economically speaking, be possible without pulling down the house that American industry built, on the heads of us all. The importers, packagers, transporters, wholesalers, retailers, bankers, insurers, real estate operators, teachers, doctors, lawyers, cannot, by taking in the wash from each other, sustain the industrial system built in this country since 1900. There are still 20 million industrial and mine workers in this country and some 3 million farm workers. They produce over 95% of all the goods that over 200 million of us consume. It is their productivity and not imports that moved us toward the high employment that has been our goal. Imports in many instances have become counterproductive in this respect. It is our productivity in physical goods that we look to for support and sustenance of our tax base, to which in turn, we look as the source of progress in our general welfare.

If we learn from the perceptions, visions, processes and practical application of principles that marked our productive course during the past seventy or eighty years and brought us to world industrial leadership, we will shape our trade policy accordingly.

We will then re-create a climate that will reopen to capital investment at home the opportunities to which it was accustomed until recently; and rising employment will respond even as workers

are displaced by more productive machinery. It will be unnecessary to halt foreign investment if we but limit imports from whatever source to a defined share of our market.

Withdrawing from imports the unearned competitive advantage conferred on them by the diffusion of our technology and the failure of our competitors to adopt a wage policy which would soon expand their home market, would return to our industries the climate in which they made their way to the forefront in industrial development and in the standard of living of the American people.

More on Higher Productivity and Employment

by

O. R. Strackbein, President

The Nation-Wide Committee on Import-Export Policy

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Among other difficult problems faced by American industry, agriculture and labor, is the one of generating higher productivity hand-in-hand with rising employment.

This problem is highly intractable for reasons that are not readily apparent. The equation is complicated by the pressure of import competition. It is also rendered rather opaque by the habit of looking upon industrial efficiency as a reflection of the rapidity of muscular movement, elimination of wasted motion, etc., as it was interpreted when time and motion studies were the bible of managerial efficiency.

Today, with advanced technology spread throughout industry and agriculture, the human physical factor has been greatly reduced. Coal miners, equipped only with pick and shovel would be hard pressed indeed to keep pace with the mammoth machines that excavate tonnages with one pass of the huge clanking steel maw. It is no contest. Labor displacement by machines is indeed the very soul of modern industrial progress. Quite aside from the deplored dehumanization of production, the march of technology has bedeviled the efforts directed toward full employment. This assertion needs

(over)

some elucidation.

While full employment has indeed become a national policy goal since the 1946 Employment Act was adopted, technological progress as assurance of higher productivity has simultaneously been emphasized as the road to a stronger international competitive posture and as the path to greater employment.

Efficiency in Coal Mining

At the outset it must be obvious that industrial efficiency calls for a maximum of output with a minimum expenditure of man-hours of labor. Therefore, on the face of it, higher productivity, which reflects and indeed embodies higher efficiency, runs counter to the notion of job-creation. It pulls in the exact opposite direction. In order to stimulate employment, the very act of displacing workers by machines, must in one way or another, lead to lower prices and sufficiently higher consumption, to lead to hiring more workers than those who have been displaced. As we shall see, this does not always happen.

Coal mining, to resume the example, became astonishingly efficient in the fifteen years after 1950 when the industry faced extinction from the widespread conversion to competing fuels, namely, diesel oil, residual fuel oil and natural gas.

After strenuous efforts to survive including desperate and radical exertion, the output per man-year of the coal miner was tripled. The increased efficiency, indeed, opened foreign markets to American coal. In recent years we have exported some

10-12% of our total coal tonnage. Previously exports were de minimis. Domestic production, which had fallen from 516 million tons in 1950 to 410 million tons in 1958, not only recovered its ground but rose to 560 million tons in 1969. If rising productivity was to assure expanded employment, surely the achievement of the coal industry should have produced that effect.

On the contrary, employment in the industry declined disastrously, falling from 415,000 miners in 1950 to 127,000 in 1968. (Statistical Abstract of the United States, 1960, Table 982, p. 728, and 1971, Table 1049, p. 642). In other words, while bituminous coal production more than recouped its loss because of the phenomenal increase in efficiency or productivity, the sharp descent in employment was not stemmed at all. (Anthracite has been on a long course of decline and is now a minor part of the coal industry).

This record should be sufficient to put us on guard against the notion that increasing productivity will automatically help employment. The displaced coal miners had no place to go. The distressful conditions in which they soon found themselves became known as the Appalachian problem. Rehabilitation has cost hundreds of millions of dollars without dispelling the distress. The handsome growth in coal exports which reached some $900 million in 1971, did not save the jobs of the coal miners.

Unexampled Efficiency in Agriculture

The agricultural program that began in the mid-thirties provides an even clearer example of the disastrous effects of advancing technology on employment under certain predictable conditions.

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The output per acre and per man-year rose as sharply as productivity in coal mining and distinctly more than in industry as a whole. Although much more of food and fibers was produced after thirty-five years of unexampled progress than formerly, the number of farm workers dropped precipitately. Once more we find the notion that productivity will lead to increased employment harshly contradicted.

In 1935 civilian agricultural employment was 10.1 million. At that time agricultural employment exceeded that of manufacturing and mining by a slight margin. (Ibid., 1951, Table 207, p. 175; and 1960, Table 263, p. 205.) In 1970 the number had fallen to 3.1 million, or less than a third of the 1935 level, while employment in manufacturing had doubled. (Ibid., 1971, Table 347, p. 222, and Table 341, p. 217). Meantime population had increased from 127 million to 204 million or 60%.

Farm output rose from an index of 59 in 1940, where 1967 equals 100, to 103 in 1970, while acreage harvested fell from 332 million acres in 1940 to 289 million acres in 1970. (Ibid., 1971, Table 952, p. 586). The index of output per man-hour on the farms, the important factor so far as employment is concerned, rose from 21 in 1940, where 1967 equals 100, to 112 in 1970. (Ibid., Table 953, p. 586). This was more than a five-fold increase! Exports of farm products rose from $679 million in 1937-41 to $6.6 billion in 1970, but obviously did not halt the worker displacement, even though the increase in dollars and cents was ten-fold!

In terms of employment this phenomenal record led to urban distress, contributing to the plight of the cities and swelling the

welfare rolls. Crowding of the ghettoes was one of the bitter fruits, or more than a veritable vintage year of acidulous grapes of wrath. On the other hand, compared with 1940, when 30.9% of personal consumption expenditures went for food, beverages and tobacco, in 1970 the share had declined to 18.5%. (Ibid., 1960, Table 405, p. 309; 1971, Table 489, p. 308, and U. S. Dept. of Agri.). In unexampled fashion our farmers had helped the American consumer; but there was price tag, as we have seen. They released billions of dollars of consumer purchasing power to be spent on nonessential goods.

Rising Productivity as a Mixed Blessing

These two examples, of coal and of agriculture, demonstrated the mixture of bitter and sweet as it occurs in increasing output per man-hour, or higher efficiency.

Yet the very technological progress that made possible that phenomenal records of rising productivity cited above but that also caused so much distress, just as surely led to higher employment in other applications in other sectors of the economy. The greater efficiency and versatility of the automobile and truck, which also was the fruit of technology, compared to the horse, wagon and buggy, led to expanded employment as the latter were all but driven out to pasture by the automated forms of transport.

The same may be said of the development of numerous other products, some new, some substitutes and some in the form of radical improvements of established products.

In the past century we have seen many job-generating inventions

and discoveries come to our economic rescue by assuring employment of additional workers. There was, however, nothing orderly or predictable about these inventions, innovations and developments. They could not be far foreseen or scheduled or even estimated in terms of the employment they might produce or displace. They were all pragmatic ventures. Who could say what the motion picture might do for employment, or the electric light bulb, and how soon; or the home refrigerator, or any of hundreds of other new or substitute or radically improved products, such as the household appliances, the telephone, office equipment and machinery; manufacturing devices, such as cigarette-making and bottling machinery, and a great variety of other factory equipment?

The present demand for higher productivity, although justified on some grounds, is uncomfortably close to the simple injunction to inventors to invent more rapidly, developers to develop these inventions more rapidly and entrepreneurs to take hold more rapidly and find the needed financial support with less delay: for, to repeat, greater productivity of any consequence, must be provided by technology, not by faster muscular movement of the machine operatives and other workers.

The Great Difference: Elasticity of Demand

It may be asked what difference lurks between the job-destroying inventions and developments in some sectors of our economy on the one hand, and the job-generating powers of other discoveries and innovations, on the other. Why did the coal industry repay

our society in one way when it extricated itself from extinction, which is to say, by decimating jobs of the miners, while the automobile industry performed an opposite role when it sent the buggies to the museums, and while the electrical appliance industry on its part, created many jobs as it came into a position through technological advancement to place in the homes of the country refrigerators, dishwashers, radio and television, home coolers, vacuum cleaners and much else?

Why, we also ask, did agricultural employment fall irreversibly and precipitately as farm mechanization, scientific agricultural improvement and plant breeding came on the scene, while employment, as just noted, was expanded by the inventions and innovations in the other fields?

In order to answer this question it is necessary only to reflect on the nature of the demand for these various products.

The demand for food products is limited by the stomach capacity of the population. When that is filled the only increase in demand can come from an increase in the population or increasing obesity. The demand for food products is therefore inelastic. This is to say, the amount of food consumed in toto is not much affected by the price. A lowering of the price of wheat does not lead to much more consumption of bread; or if it does, the greater amount of bread consumed will reduce the amount of some other food ingested.

For this reason the increased productivity of our agriculture produced an unfortunate effect on employment. If great tractors

and combines cut down the number of wheat-farm workers, or corn-planting machines released farm workers because of the higher productivity, these evicted workers remained displaced in the agricultural pursuits even though relatively or absolutely, lower bread and hog prices resulted from the improvements. Of course, higher exports might relief the pressure, but that would in the end only shift the problem elsewhere in the world. Already we have seen that our agricultural exports, in dollars and cents, multiplied ten-fold in thirty years, without halting the exodus of farm workers - some seven million of them, from their fields to wherever they wandered.

It may be enlightening to mention that most of our crop acreage is devoted directly or indirectly to furnishing food for the people. The principal exceptions are the acreage devoted to production of fiber (cotton, wool), hides and skins (for leather and fur) and tobacco. The total of these exceptions would hardly reach 10% of the total harvested acreage. (Ibid., 1971, Table 951, p. 605).

Since food is a necessity provision must be made for its production; but we must not look to agriculture to lend us a useful hand toward achievement of full employment. Exports of farm products cannot for the same reason be looked to as a significant contributor to employment. Of the 1969 farm crop, marketed for $51.2 billion (current dollars), exports totaled $5.7 billion or about 11% (18.2% of these total exports, however, being exported under Government programs), (Ibid., 1971, Table 938, p. 599; Table 946, p. 602).

Since farm employment in 1969 stood at 3.2 million workers,

some 352,000 farm jobs could be attributed to agricultural exports. However, in 1950 when the value of farm products sold was $22.05 billion, exports were at $2.85 billion or 13% of the total. At that time farm employment stood at 9.34 million.

Therefore, assuming exports of 13% also accounted for 13% of farm employment, exports in 1950 provided jobs for 1.21 million workers. This meant that in 1969 some 950,000 fewer farm jobs were attributable to agricultural exports than in 1950, despite the higher volume of the 1969 exports. (Ibid., 1954, Table 777, p. 661; Table 787, p. 671 and Table 231, p. 205).

So far as moving toward full employment is concerned, agricultural exports clearly represent a negative experience.

The Role of Efficiency in the Production of Non-Essential Goods

However, the whole of the demand for agricultural products is not inelastic. The demand for fibers and leather is quite elastic since a surfeit is not soon reached, if consumer purchasing power remains high. These products meet both an essential need while gratifying desires that lie far beyond the essential level. Style, fashion and the prestige linked to haute couture and "conspicuous consumption" assure sales in quantities and qualities not confined to the requirements of bodily thermal comfort. How many dresses, gowns, stockings, shoes, fur pieces can be found in wardrobes when one of each would suffice for a considerable period of time has not been recorded. Nevertheless common experience of bill payers sustains the conclusion that while food-intake is limited by the head-

count, as modified by waist-measure, the same is not true of clothing, from head to foot.

Therefore higher productivity in the manufacture of these items does lead to higher consumption as it does with respect to a vast array of nonessential but acceptable and desirable goods that consumers will buy as their pocketbooks permit. Whether in the case of cotton goods the increase in farm productivity achieved through higher yield per acre and the extensive eviction of cotton pickers by machines, and other workers through use of herbicides, use of tractors, etc., led to sufficiently greater employment in the cotton mills and apparel and needle trades to offset the displacements on the farms is somewhat difficult to determine, particularly because of the encroachment of man-made fibers on cotton as a raw material. The per capita mill consumption of cotton has declined from 32.2 lbs 1945 to 18.6 lbs. in 1970, while the per capita mill consumption of man-made fibers increased from 6.1 lbs. to 26.9 lbs. (Ibid., 1971, Table 1150, p. 703). Total fiber consumption did increase from 37.2 lbs per capita in 1940 to 46.7 lbs in 1970.

Nevertheless, certain conclusions may be drawn from the trend in employment in the textile mills and apparel factories. In 1947, according to the Census of Manufactures, total employment in the manufacture of Textiles and Apparel was 2.314 million, while in 1969 employment had reached only 2.355 million. (Ibid., 1954, Table 979, p. 818 and 1971, Table 1141, p. 690.) Meanwhile our population had grown by 40%.

If employment had kept pace in the textile industry with population growth, the 2.314 million employed in 1947 should have grown

to 3.235 million in 1969. The shortfall was therefore about 880,000. Obviously, even though the demand for textile products is relatively elastic, as shown by the increase in per capita consumption, the number of jobs did not increase sufficiently to offset the displaced workers on the farms and in the factories, combined.

Some negative factor operated during this period toward retardation of employment expansion. Imports no doubt provided much of the negative influence. They rose from an average level of $801 million in the 1946-50 period to $2,124 million in 1969. (Ibid., 1954, Table 1092, p. 928, and 1971, Table 1247, p. 778). These values, while in current rather than constant dollars, in fact represent a smaller growth than import quantities because of the decline in textile product prices during the period concerned. Our wholesale prices on cotton products declined from an index of 109.5 in 1950, where 1967 = 100, to 104.5 in 1969, while the price of man-made fiber textile products declined more sharply, from 135.8 to 102.1 in the same period. The latter decline helps explain the shift from other fibers to the man-made substitute. (Ibid, 1971, Table 531, p. 335).

The negative influence of rising imports thus had the effect of converting what is an elastic demand into a market that behaved, so far as sales of the domestic product were concerned, into a demand that behaved as a typically inelastic one. The textile industry, or rather our economy, was thus deprived of the fruits of higher employment that usually go hand-in-hand with a rise in productivity. The net result was similar to that experienced in agricultural employment,

where the inelasticity in demand, arising from the nature of the product, resulted in a vast displacement of labor by the rising efficiency of our agriculture.

The Range or Scope of Elastic Demand

No one has catalogued the goods that enjoy an elastic demand, nor those for which the demand is inelastic or those falling into some intermediate level. The inelasticity of demand for food products is of itself of great importance because nearly a fifth of consumer expenditures goes for food and beverages. In 1969 the total value of shipments of food and kindred products (wholesale) was $93 billion or 80% higher than the outlay for motor vehicles and equipment. (Ibid., 1971, Table 1141, pp. 690-4).

The demand for coal would, if taken by itself, be regarded as inelastic; but a price reduction may increase the demand for coal at the expense of competing fuels. Coal, however, is not bought for itself. Before other fuels competed with it, it was a necessity in the colder parts of the country for heating and in nearly all parts for lighting. Its greater use for power in recent years reflects its newly gained competitive standing thanks to the much higher productivity gained at the cost of what we already know. Unlike many of the nonessentials, the consumption of coal is not a mark of social prestige or pride of ownership. Therefore the price of coal, except as it competes with other fuels, is not the prime determinent of the amount consumed.

The same may be said of most of the competing fuels, with the

notable exception of gasolene. This fuel is so closely linked with the automobile that the demand for it partakes of the elasticity of the demand for motor cars. Without the latter, gasolene would drop to a minor status.

The demand for certain other products may be regarded as relatively inelastic because of their small share of the total budget. Dentifrices are not sold because of their low price but because of their hygienic value. The market may expand beyond the population growth because of extension of hygienic practices to segments of the population that previously were not consumers. Once the use were extended to all elements of the population, however, any increase in the market would depend on population growth, much less on price.

The demand for steel is a mixed aggregate. While steel is not bought for itself it is a component of many articles that are bought for themselves. The automobile is the prime example. Yet the price of steel under ordinary circumstances does not determine the demand for automobiles. The cost of steel in 1967 represented only 4% of the value of all manufactured goods. (Ibid., 1970, Table 1119, pp. 700-704).

We may examine the employment trend in the production of other goods for comparative purposes. Because of our attention to food products, it is desirable to test the conclusions presented above with respect to inelasticity of demand for this item.

In 1947 employment (all workers) in the production of Food and

Kindred Products was 1,441,000. In 1958 the level had risen to 1,688,000, but in 1969 stood at 1,656,000. From 1947-69 the increase was 14.9% while U. S. population increased 40%. (Ibid., Table 893, p. 748; 1960, Table 1068, p. 782; 1971, Table 1141, p. 690).

Food products are, of course, a necessity. In the case of Textile Mill Products, which are also essential but spill over into the nonessential, for which the demand is elastic, the employment moved downward from 1947-69. The 1947 level was 1,233,000. The 1969 figure was 972,000. We have already mentioned textile imports as a contributing cause of this trend. Yet, mill consumption of textile fibers in this country increased, as we have already seen, by 25%.

Since employment declined by 25% during this period, increasing productivity was evident. Inasmuch as a price decline was registered against the general upward trend, employment should have increased or at least not declined. Therefore the role of rising imports cannot be dismissed lightly. The profits on stockholders' equity had fallen to very low levels in early 1958. It was less than 1% in the first quarter of 1958, when the short-term restriction on exports of cotton textiles from Japan took effect. The year ended with an average profit on stockholders' equity of 3.5%. (Ibid., 1960, Table 635, p. 494.) In 1960 the profits had risen to 5.8%, compared with an average of 9.8% for all nondurable goods (Ibid., 1971, Table 742, p. 473).

In 1965 profits rose to 10.9% compared with a profit of 12.2% for all non-durable goods. The so-called long-term and more restrictive agreement on exports to this country had been negotiated. By

1970, however, profits were down to 5.1%, compared with 10.3% for all nondurables.

Apparel Manufacturing did distinctly better. These manufacturers, of course, enjoyed the importation of textiles, i.e., their raw product, at low prices. The 1958 profits were 4.9% compared with 3.5% for textile mills. In 1960 the rate was 7.7% compared with 5.8% for the mills; in 1965, 12.7% against 10.9 for the mills; in 1970, 9.3% compared with 5.1% for the mills.

As might be expected, employment in Apparel and Related Products exhibited an upward trend compared with the downward one in textile mills. It rose from 1,081,000 in 1947 to 1,383,000 in 1969 while employment in the textile mills had fallen from 1,233,000 to 972,000. These opposing trends support the shrinking effect of imports even when the demand for the product is elastic and when productivity was rising. Sales by domestic textile mills should have grown sufficiently to assure an increase in employment, because the rise in productivity should have reduced prices, as it did, and thus tapped more customers for the finished product. This did not happen no doubt because imports at lower prices held a decisive competitive advantage.

If we turn to some other industries, we encounter trends at considerable variance from those reflected by the food, textile and apparel industries. Electrical Machinery recorded a large increase in employment during the 1947-69 period, rising from 801,000 to 1,916,000. Included in this general classification are household appliances of all kinds, radio and television sets, etc. The demand

for these products is elastic. By and large they are nonessential but met the desires of housewives for labor-saving devices and for appliances that provided comfort and convenience. Demand grows as the price is reduced. In recent years import competition in Household Electronic Equipment has risen to very high proportions, and employment in the manufacture of Radio and Television sets actually declined by 5,000 from 1967-69 (Ibid., 1971, Table 1141, p. 694) while total employment in electrical equipment and supplies manufactured other than radio and TV increased by 46,000.

In the manufacture of Machinery Except Electrical employment also rose, moving from 1,244,000 in 1947 to 1,935,000 in 1969, or an increase of 55%. The demand for machinery, not unlike that for steel, is not for machinery itself, with some exceptions, but depends on the demand for the products produced by machinery. Since these end products consist principally of nonessential consumer goods, meaning in particular nonfood items, the demand for them is typically elastic, so that this elasticity is reflected back upon the producing machinery.

The production of Chemicals and Allied Products also registered a substantial increase in employment, rising from 632,000 in 1947 to 883,000 in 1969, an increase of 32%. The demand for chemicals is also predominantly indirect. Sales are not usually for personal consumption. The consumer does not buy industrial chemicals, for example, the largest single item. He does buy pharmaceuticals, toilet goods, some paints, etc., but the demand for the chemicals principally is indirect. Therefore the elasticity

or inelasticity of the demand for the finished products is, again, reflected backward to the raw or processing materials used in producing the end products.

The classical item of consumer goods for which the demand is demonstrably elastic is Motor Vehicles and Equipment. In this field employment, while rising, rose very moderately, going from 705,000 in 1947 to 811,000 in 1969, or only 15%. This modest increase places this industry alongside of Food and Kindred Products, where the increase in employment was 14.9%. The rising importation of automobiles no doubt represented a dampening influence on employment. In 1965 imports were 559,000 passenger cars. Employment in the domestic industry was 843,000. By 1970 imports had risen to 2.013 million cars and employment had dropped to 810,000. (Ibid., 1971, Table 345, p. 220, and Table 846, p. 533).

The effect of the rising imports on employment is hardly mistakable. Domestic employment should, of course, have risen if imports had not supplied 23% of the number of automobiles sold in 1970. If employment in the Motor Vehicle industry had done as well as the machinery group (electrical and nonelectrical) employment would have risen by 90% from the 705,000 level in 1947 to 1,339,000 in 1969. Instead, it rose only to 811,000. Here then were several hundred thousand jobs that failed to materialize. During this period productivity in motor vehicle manufacture rose 67%, (1947-69), calculated by dividing output by the number of employees.

Profits of the industry, however, were highest in terms of stockholders' equity of any other in the durable goods field in

1960, or 13.5%, compared with an average for all durable goods of 9.2% and 7.2% for steel, and 5.8% for textiles. The 1965 rate was even higher, at 19.5% against a 13.0% average for all durable goods. In 1969 this industry again led durable goods group with 12.6% compared with 11.5% for the whole group, 7.6% for steel and 7.9% for textiles.

These record profits in motor vehicles would point to a possible weak competitive condition in the industry, whereas a strong competitive rivalry is necessary to extend to consumers the savings accomplished through higher productivity. Absent such competition sales will not mount sufficiently to beget added employment above the workers laid off by higher productivity.

Of course, machinery production, which, as just noted, increased handsomely, was stimulated by rising exports in response to our rising foreign investment and by the choice of the other non-Communist industrial countries to adopt our system of production, which is to say, our technology with its amazing productivit. In 1970 our exports of machinery reached $11.6 billion or a little over 10% of our production. While machinery imports have been rising they are still less than half of our exports.

Profits of the machinery industry have been in the top ranges of all durable goods industries, but not as high as in motor vehicle production. In 1960 electrical machinery profits were 9.5% on stockholders' equity compared with the average of all durable goods, of 8.5%. In 1965 they fell below the general average at 13.5% against 13.8%. Motor vehicle profits in the same year were

at 19.5%. In 1970 the rate for the electrical machinery industry was down to 9.1 against 8.3% for all durables and 6.1% for motor vehicles. Machinery Except Electrical was lower at 7.5% in 1960, but in 1965 exceeded the average for the durables with a rate of 14.1% against 13.0% and in 1970 fell less sharply, to 9.9%, against 8.3% for all durables. (Ibid., 1971, Table 742, p. 473).

The high exports of our machinery led to great advances in foreign productivity while foreign wages lagged far behind the levels in this country. The higher foreign productivity increased the competitive advantage over American producers in numerous fields. Imports of Iron and Steel Mill products surpassed our exports in 1958 and rose to some 15% of our total consumption in 1968. Foreign exports to this country were limited in 1969 and again in 1972 to a level of some 14%-15% of our total market. Meantime our steel exports shrank sharply.

Profits on stockholders' equity were low compared with those enjoyed by the machinery industry, standing at 7.2% in 1960, 9.8% in 1965 when machinery averaged 13.6%; and 4.3% in 1970 compared with the machinery average of 9.5%. (Ibid; 1971, Table 741, p. 473). Employment in the steel industry rose from 510,000 in 1958, the year before the first restriction on imports and rose to 621,000 in 1969. This was an increase of 21%. Employment in machinery (both electrical and non), rose from 2,569 in 1958 to 3,854 in 1969, or by 50%.

The contrast is substantial. If the steel industry had done as well, it would have added 255,000 workers instead of the 110,000

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it added during the 1958-69 period.

Footwear, Except Rubber was more pedestrian in its employment progress. In 1947 employment was at 220,000. In 1958 it had risen to 234,000 but in 1969 the number had fallen to 211,000. In recent years imports have risen sharply, to the point of absorbing over 25% of the market, and factory output has declined. In 1965 shoe and slipper production in this country was 535 million pairs; in 1970, 453 million pairs. (Ibid; 1971, Table 1161, p. 707.) Had employment kept pace with that in the machinery industry the 1969 employment would have reached more than 400,000 instead of falling to 211,000.

Demand for footwear may be regarded as reasonably elastic. Consumers may as a matter of social pride possess many more pairs of shoes than are needed. Styles are frequently changed in order to render the existing shoe surplus in the wardrobe obsolete. If prices are lowered substantially and purchasing power is adequate consumption increases.

The flow of investment abroad is well under way in the footwear industry; and this trend is but a repetition of a movement that has had a powerful influence on employment prospects in this country. The achievement of higher productivity here offers no assurance under these circumstances, that the benefits of higher productivity will be registered (1) in increased sales even as prices may be reduced, or (2) in higher employment as a result of increased consumption.

Conclusion

From the foregoing incomplete recitations it becomes clear enough that unless certain steps are taken that will in its essentials restore the U. S. market to domestic producers who seek (A) to launch new products in search of a national market such as could be depended upon in the past to assure sales in millions of units if the product was (1) acceptable to consumers, (2) was labor-saving, contributory to comfort or convenience,(3) was a morale booster through prestige enhancement or joy of possession, and, or (4) was made available at prices low enough to fit the mass pocketbook; or (B) should he seek to effect a radical improvement in the production of established goods that enjoy an elastic demand, so that the price may be lowered substantially and thus tap rich veins of lower income levels - unless, to repeat, this is done, through well moderated import restrictions that will provide an entrepreneur or provider of risk capital time in which to develop a national market and enjoy the rewards of his efforts, without the obvious danger of losing it to imports that for a variety of reasons bear a much lesser cost burden than this - unless, to reiterate, this is done, all efforts to restore our economy through higher productivity will come a cropper.

Higher productivity will indeed succeed in displacing workers, as in the past, but it will not of itself assure the added employment that in the past greeted higher productivity and lower prices with a greatly enlarged market, if the product was one that enjoyed an elastic demand.

To be sure, demand elasticity has not been calibrated, but practical experience will offer a sufficiently reliable guide.

The record compiled by our experience in agriculture and in the coal fields as related above, offers irrefutable evidence of the countervailing effects of higher productivity on employment in those instances in which the demand for the product is inelastic.

The record of employment in other industries, also reviewed above, likewise sustains the conclusion that increasing productivity in the output of products that enjoy an elastic demand, will be deprived wholly or in part, of its historic contribution to expanding employment, if competitive imports enjoying a cost advantage traceable to lower foreign wages coupled with high productivity, contest the domestic market with the American producer. The imports, unless properly controlled, will not indeed destroy the elasticity of the demand but will convert it into a sterile asset so far as generation of additional employment in this country is concerned. Higher employment as such will not be destroyed. It will be transferred abroad, while domestic employment will languish as it has in the industries reviewed herein, as noted.

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INTERNAL MIGRATION IN THE UNITED STATES: A BIBLIOGRAPHY, 1955 to 1971

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INTERNAL MIGRATION IN THE UNITED STATES: A BIBLIOGRAPHY, 1955 to 1971

This bibliography provides references to books and articles concerned with various aspects of internal migration in the United States. It includes articles on rural to urban migration, migration within regions, movement between urban and suburban places, as well as articles dealing with why people move, and the costs and benefits associated with this movement.

In order to make the bibliography more manageable, the citations have been divided into three categories according to their date of publication: 1955 to 1964, 1965 to 1969, and 1970 to 1971.

The best source of information on the number of people moving from place to place is the U.S. Census of Population. All the migration information from the 1960 census has been published. In addition, data already published from the 1970 census, or in the process of being published, contains 1970 migration data. In particular, the PHC (2) series on the general demographic trends for metropolitan areas and the PH1 (C) series on general social and economic characteristics of the population contain migration data. The Census Bureau hopes to have its special reports on migration based on 1970 sample data begin appearing in late 1972 and completed in 1973.

The Census Bureau also makes yearly estimates of population migration within the United States. This information is found in the annual report on mobility of the population which is part of the P-20 series (Population Characteristics) of current population reports, which is published by the Census Bureau.

As more 1970 census statistical data are made available, there will be a number of newspaper and magazine articles, as well as books appearing which deal with internal migration in the United States. Those wishing to locate these articles and books should check the major periodical indices under the following headings:

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IS IT "MORE BLESSED TO GIVE THAN TO RECEIVE"?

(A Study of Federally-Subsidized Grower Attitudes Toward Federal Assistance to the Poor)

"Giving Causes Loss of Pride"

(Wife of Madera County grower receiving $29,000 from Federal Agricultural Subsidy Program in explanation of her opposition to federal welfare assistance to the poor)

Study conducted from October to November, 1968, under auspices of California Rural Legal Assistance, Inc. by its Deputy Director, Robert L. Gnaizda

PREFACE

"The Bible says a man should work." (Explanation of grower who received $18,000[1] from Federal Agricultural subsidy program in explanation of why he is opposed to federal assistance to the poor.)

In 1966, the Federal Government paid one hundred and eighty-five (185) Madera County, California growers $5,000 to $133,555 not to grow, or to raise the price of, certain basic crops. Payments were made pursuant to the Agricultural Stabilization and Conservation Service Program. (A total of $3,281,621,070 was paid to American growers and $103,881,250 to California growers, primarily to raise the prices of wheat, cotton, wool and sugar.)

During the week ending November 3, 1968, a random sample -- one-fourth or 25.4% -- of these Madera County subsidized growers were questioned by a Stanford University graduate student[2] as to their attitudes toward federal assistance to poor people.[3]

This study was sponsored by California Rural Legal Assistance.[4] The results of the study were compiled by CRLA's Deputy Director, Robert L. Gnaizda.[5] Its purpose was to examine the attitudes of growers receiving federal support toward similar

(1) In order to avoid identification of any specific grower, the dollar amount received by individual growers has been slightly altered up to a maximum of ten per cent.

(2) Miss Robin Yeamans, a third year Stanford Law School student, conducted the study through direct telephone interviews.

(3) Appendix A contains a sample questionnaire.

(4) California Rural Legal Assistance, Inc. (CRLA) is a non-profit California corporation funded by the Office of Economic Opportunity. It is directed by a Board of Trustees, a majority of whom are California attorneys appointed by the State Bar and local bar associations. It provides free legal services to indigents, a majority of whom are migrants, farm workers, and/or Mexican Americans. This service is provided in nine widely-separated rural areas of California. CRLA was recently the recipient of OEO, National Advisory Committee for Legal Services' national award as the outstanding legal service program in the U.S.

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federal government assistance to the poor. Of special interest was the grower attitude toward federal programs for the poor which paralleled agricultural crop subsidies.

SUMMARY OF RESULTS

> "I can't understand having things handed to you." (Wife of grower receiving $16,000 from crop subsidy program in explanation of her opposition to federal welfare assistance to poor persons.)

Federally subsidized growers were found to be hostile towards most forms of federal assistance to the poor. The more closely the federal assistance paralleled the assistance they received through agricultural subsidies, the greater their hostility.

More than half of the growers (57%) were opposed to present federal welfare assistance for the poor. Eight out of ten (81%) were opposed to a guaranteed annual income of $4,500 for a family of seven. Nine out of ten (94%) were opposed to providing a minimum of $4,000 to a family of five in order to avoid depressing wages during a period of high unemployment.

The only exception to this hostility was the widespread support for the federal food stamp program for the poor. 85% favored such a program.

No interviewee uniformly responded to the five questions asked and responses were received to 92.34% of the questions asked.

(5) Robert L. Gnaizda is a graduate of Columbia University '57, and Yale Law School '60. Prior to employment with California Rural Legal Assistance he was a California tax attorney. He has lectured on poverty and rural law at Stanford and the University of California Law Schools and is a consultant and lecturer for the Office of Economic Opportunity.

Less than one in ten (8%) recognized, at least verbally, the parallels or similarities between the federal assistance they were receiving and the federal assistance they were opposed to poor persons receiving.

A recently completed Gallup Poll ("New York Times," January 5, 1969, p. 44) indicates that grower opposition to a guaranteed annual income (81%) opposed reflects the national sentiment. Sixty-two per cent of the entire Gallup sample and seventy-two per cent of the "$10,000 and over" group opposed a guaranteed annual income.

FINDINGS

> "Idleness causes many evils." (Statement of grower, receiving $8,000 from federal crop subsidies, who opposed all forms of federal assistance to poor persons.)

> "[The guaranteed annual income] is like the farm program. It is a good idea in time of transition when going to automation." (Statement of the only grower who supported federal assistance to the poor with any degree of enthusiasm. This grower received $12,000 from the federal crop subsidy program.)

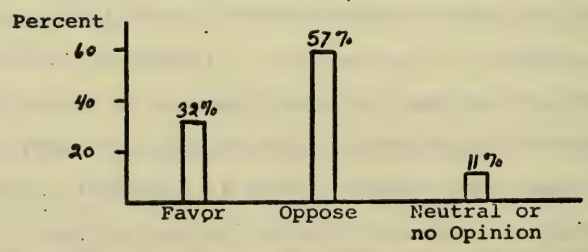
Madera County, California, population 45,400, lies in the fertile San Joaquin Valley. Its county seat, the city of Madera, population 16,800, is at the exact geographical center of California, twenty miles north of Fresno and two and a half hours driving time southeast of San Francisco. Its population, including most of its welfare families, is mainly engaged in agricultural pursuits. Madera's agricultural wealth consists primarily of beef, cotton, grapes and alfalfa; and it is reputed to be the chinchilla capital of the world. It is, on the one hand, the thirty-seventh wealthiest agricultural county in the nation (top 2%); and on the other hand it has the highest concentration of

poor families (29.8%), and one of the highest infant mortality rates in the state of California (10.1 per 1,000).

In 1966, the federal government paid 185 Madera County growers $5,000 to $133,555 in order to encourage them to restrict production, or to raise the price of crops basic to the needs of the American people. These payments, in the aggregate amount of $3,008,901 for Madera, were made pursuant to the Agricultural Stabilization and Conservation Service Program under the auspices of the United States Department of Agriculture. One-fourth of these federally-subsidized Madera County growers, or their wives,[6] (47 or 25.4%) were interviewed by a third year Stanford law student, Robin Yeamans. The interviews were done independently of California Rural Legal Assistance, or any other organization, and were conducted on October 31 and November 1, 1968.

An identical set of five questions was asked of each grower in order to determine the view of persons receiving substantial federal subsidies toward similar federal assistance programs for poor people.[7]

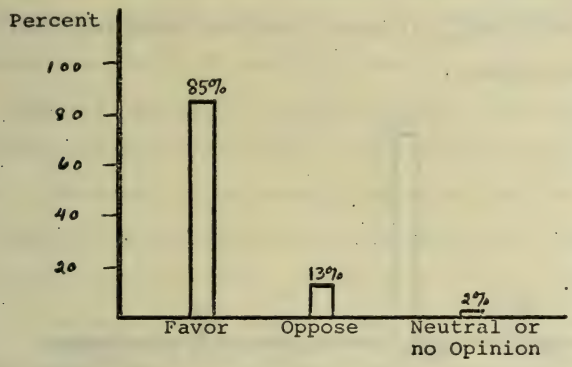
1. 57% of Subsidized Growers Opposed to Present Welfare Assistance



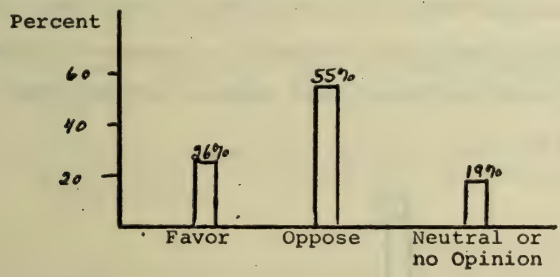
(6) No significant statistical difference appeared between the responses of growers and those of their wives.

(7) See Appendix A for Questionnaire Form.

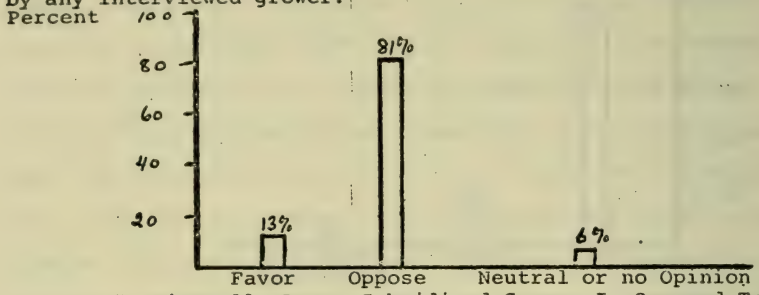
2. 85% of Growers Favor Food Stamp Program: This was the only area in which subsidized growers favored federal assistance to poor persons.



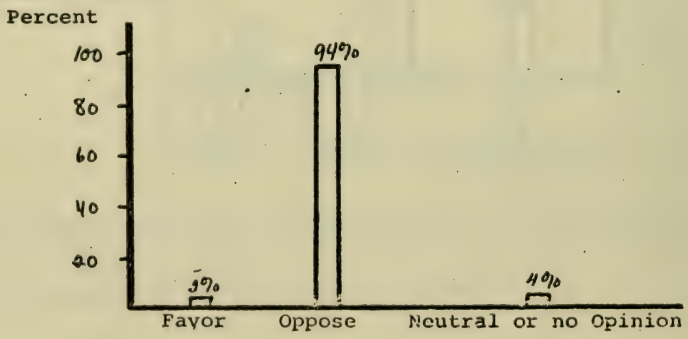
3. Only One-Fourth of Growers Support Raising Welfare Assistance To Meet Government-defined Minimum Needs of Poor Persons: (The present welfare system in California provides between 75% and 80% of the state-defined minimum needs of poor persons, thereby compelling most persons on welfare to go without essential food and clothing.)



4. 8 Out Of Every 10 Subsidized Growers Oppose A Guaranteed Annual Income To Poor Persons: The question asked was whether the grower favored a guaranteed annual income for a family of seven of $4,500, an amount less than that received by any interviewed grower.



5. Virtually Every Subsidized Grower Is Opposed To Providing Assistance For Poor Persons Comparable In Nature And Effect To What He Received From The Federal Government: Growers were asked if they favored providing a family of five with as much as $4,000 a year not to work when there were too few jobs, too many potential workers, and it was thought necessary to pay certain workers not to work in order to keep wages of other workers high. This proposal parallels, both in approach and effect, what the agricultural subsidy program has attempted to achieve for growers. Growers were more negative toward this than any of the other programs referred to.



Only 7% of the growers indicated opposition to all five of the questions posed. None, however, answered affirmatively as to all such questions. Two-thirds (68%) were opposed to a majority of the programs they were questioned about and only 15% favored a majority of such programs.(8)

Sample illustrative comments by the interviewees, in explanation of their opposition to federal assistance to the poor, follows: (The material in parentheses refers to the amount of the annual federal subsidy received by the grower and summarizes his, or her, position as to federal assistance to poor persons.)

A. "Worried about abuses...work's good for everybody." (Received $30,000; opposed to all but food stamp program)

B. "Too much like farm program" (Received $15,000; opposed to guaranteed annual income or programs comparable to farm subsidy program)

C. "Like farm program. Don't like either." (Received $5,000; opposed to all but food stamp program)

D. "Everybody should have it as hard as I did." (Received $7,000; opposed to all programs including food stamp)

E. "Anyone healthy shouldn't get more than what they can earn." (Received $27,000; opposed to all but food stamp program)

F. "I can't understand having things handed to you." (Received $17,000; opposed to all but food stamp program)

G. "Different people eat different ways -- depends on nationality." (Received $12,000; opposed to food stamp program)

(8) The remaining 17% is attributable to some interviewees failing to comment on a sufficient number of questions to enable them to be included in either of these groups.

H. "Idleness causes many evils. Must show people they need to help themselves." (Received $8,000; opposed to all programs including food stamp programs)

I. "They [poor people] make more than anyone today." (Received $12,000;opposed to all but food stamp program)

J. "I'm against any supplement of any kind." (Received $6,000; opposed to all but food stamp program)

K. "We don't want to create generations of idle people." (Received $9,000; opposed to all but food stamp program)

CONCLUSION

"I can't understand having things handed to you."
(Grower who received $17,000)

"That man may last, but never lives,
who much receives, but nothing gives;"
(Thomas Gillon, When Jesus Dwelt)

The results of the study speak for themselves. Although some growers sought refuge in the Bible as support for their opposition, only one sought to follow the New Testament admonition that, "It is more blessed to give than to receive."(9) Perhaps, the nineteenth century American poet Will Carleton best summarized this sanctimonious attitude when he said:

"Thanksgiving-day, I fear,
If one the solemn truth must touch,
Is celebrated, not so much
To thank the Lord for blessings o'er,
As for the sake of getting more!"
(Will Carleton, Captain Young's Thanksgiving)

(9) New Testament: Acts 20:35

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